

**STIC Database Tracking Number: 249393**

**To: AMINA KHAN**  
**Location: REM-9A49**  
**Art Unit: 1796**  
**Monday, January 28, 2008**

**Case Serial Number: 10/529744**

**From: MEI HUANG**  
**Location: EIC1700**  
**REM-4B28 / REM-4B31**  
**Phone: (571)272-3952**

**mei.huang@uspto.gov**

## Search Notes

**Examiner KHAN:**

Please feel free to contact me if you have any questions or if you would like to refine the search query. Thank you for using STIC services!

Regards,  
Mei



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art found, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art *not* found:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

=> fil reg  
FILE 'REGISTRY' ENTERED AT 11:30:49 ON 28 JAN 2008  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 27 JAN 2008 HIGHEST RN 1000849-38-6  
DICTIONARY FILE UPDATES: 27 JAN 2008 HIGHEST RN 1000849-38-6

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when  
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REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d que stat l14  
L11 SCR 2043  
L12 SCR 1838  
L13 STR

C~O~Ak—OH  
1 2 3 4

NODE ATTRIBUTES:  
CONNECT IS E2 RC AT 3  
DEFAULT MLEVEL IS ATOM  
GGCAT IS SAT AT 3  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE  
L14 34069 SEA FILE=REGISTRY SSS FUL L13 AND L11 NOT L12

100.0% PROCESSED 200545 ITERATIONS 34069 ANSWERS  
SEARCH TIME: 00.00.02

=> d his nofile

(FILE 'HOME' ENTERED AT 09:31:08 ON 28 JAN 2008)

FILE 'HCAPLUS' ENTERED AT 09:31:18 ON 28 JAN 2008  
L1 1 SEA ABB=ON PLU=ON US2007022541/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 09:31:36 ON 28 JAN 2008

L2 14 SEA ABB=ON PLU=ON (1344-09-8/BI OR 25087-26-7/BI OR  
25549-84-2/BI OR 26677-99-6/BI OR 302-01-2/BI OR  
3483-12-3/BI OR 68-11-1/BI OR 681854-09-1/BI OR 681854-10  
-4/BI OR 681854-12-6/BI OR 681856-07-5/BI OR 7803-49-8/BI  
OR 9002-98-6/BI OR 9005-25-8/BI)  
D SCA

FILE 'LREGISTRY' ENTERED AT 09:47:40 ON 28 JAN 2008

L3 329 SEA ABB=ON PLU=ON "(C2H4O)"

FILE 'REGISTRY' ENTERED AT 09:50:19 ON 28 JAN 2008

L4 116878 SEA ABB=ON PLU=ON "(C2H4O)"  
L5 32405 SEA ABB=ON PLU=ON L4 NOT NR>=1  
L6 12678 SEA ABB=ON PLU=ON L5 AND NC=1  
L7 4942 SEA ABB=ON PLU=ON L6 NOT P/ELS NOT S/ELS NOT N/ELS NOT  
SI/ELS  
L8 4280 SEA ABB=ON PLU=ON L7 NOT X/ELS  
L9 6358 SEA ABB=ON PLU=ON L6 AND ?HYDROXY?/CNS  
L10 1838 SEA ABB=ON PLU=ON L9 AND ?ETHER?/CNS  
ACT ASD578/A

L11 SCR 2043

L12 SCR 1838

L13 STR

L14 34069 SEA SSS FUL L13 AND L11 NOT L12

L15 1676 SEA ABB=ON PLU=ON L8 AND L14

L16 372 SEA ABB=ON PLU=ON ?DIMERCAPTO?/CNS OR ?DITHIOL?/CNS

L17 91759 SEA ABB=ON PLU=ON ?DIMERCAPTO?/CNS OR ?DITHIOL?/CNS

L18 1 SEA ABB=ON PLU=ON L2 AND L17

D SCA

L19 44 SEA ABB=ON PLU=ON C4H10S2/MF

L20 14 SEA ABB=ON PLU=ON L17 AND L19

D SCA

L21 1 SEA ABB=ON PLU=ON L20 AND 1,4-BUTANE-2,2,3,3-D4-DITHIO  
L/CN

L22 1 SEA ABB=ON PLU=ON L20 AND 1,4-BUTANEDITHIOL/CN

L23 1 SEA ABB=ON PLU=ON L20 AND "1,4-BUTANEDITHIOL, RADICAL  
ION(1+)" /CN

L24 3 SEA ABB=ON PLU=ON (L21 OR L22 OR L23)

L25 3010 SEA ABB=ON PLU=ON L17 NOT NR>=1

L26 1950 SEA ABB=ON PLU=ON L25 AND NC=1

FILE 'LREGISTRY' ENTERED AT 11:01:28 ON 28 JAN 2008

L27 STR

FILE 'REGISTRY' ENTERED AT 11:05:59 ON 28 JAN 2008

L28 25 SEA SSS SAM L27

L29 SCR 2043

L30 13 SEA SSS SAM L27 NOT L29

L31 SCR 1838 OR 1992 OR 2016 OR 2021 OR 2026 OR 1929 OR 1918

L32 50 SEA SSS SAM L27 NOT L31

L33 STR L27

L34 0 SEA SSS SAM L33

L35 3 SEA SSS SAM L33 NOT L31

D SCA

L36 0 SEA SSS SAM L33 NOT L29

D IDE L35 1

L37 1 SEA ABB=ON PLU=ON 111-30-8/RN

D SCA



FILE 'HCAPLUS' ENTERED AT 11:18:22 ON 28 JAN 2008

L38 37517 SEA ABB=ON PLU=ON POLYELECTROLY? OR POLY(A)ELECTROLY?  
L39 454 SEA ABB=ON PLU=ON L24  
L40 2 SEA ABB=ON PLU=ON L38 AND L39  
L41 19153 SEA ABB=ON PLU=ON L26  
L42 34 SEA ABB=ON PLU=ON L38 AND L41 A+B  
L43 131317 SEA ABB=ON PLU=ON L15  
L44 4 SEA ABB=ON PLU=ON L42 AND L43  
D HITSTR 1  
L45 70528 SEA ABB=ON PLU=ON L17  
L46 34 SEA ABB=ON PLU=ON L40 OR L42  
L47 102 SEA ABB=ON PLU=ON L45 AND L38 A+B  
L48 10 SEA ABB=ON PLU=ON L47 AND L43 A+B+C  
L49 10 SEA ABB=ON PLU=ON L48 OR L44  
L50 11914 SEA ABB=ON PLU=ON L37  
L51 0 SEA ABB=ON PLU=ON L49 AND L50 A+B+C+D

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 11:30:59 ON 28 JAN 2008

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FILE COVERS 1907 - 28 Jan 2008 VOL 148 ISS 5

FILE LAST UPDATED: 27 Jan 2008 (20080127/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l46 ibib abs hitstr hitind 1-38

L46 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1334601 HCAPLUS

DOCUMENT NUMBER: 147:548257

TITLE: Polymeric hydrogel nanocomposites for ophthalmic applications

INVENTOR(S): Ravi, Nathan

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 27pp., Cont.-in-part of U.S. Ser. No. 706,081.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2007269488	A1	20071122	US 2007-574667	20070405
US 2004156880	A1	20040812	US 2003-706081	20031113
WO 2005023331	A2	20050317	WO 2004-US28637	20040903
WO 2005023331	A3	20070503		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AP, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, EA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, EP, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, OA, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 2002-425764P	P
				20021113
			US 2003-499887P	P
				20030904
			US 2003-706081	A2
				20031113
			US 2004-564592P	P
				20040423
			WO 2004-US28637	W
				20040903

AB The present invention relates to reversible hydrogel systems for intraocular lenses. Particularly, the hydrogel of the present invention is made up of copolymers that can be a hydrogel when in an oxidized state and can be a solution when in a reduced state. A solution of the copolymer can be oxidized to form a hydrogel; and the hydrogel can be reduced to form a solution of the copolymer. Reversible nanogels can also be formed from a dilute solution of the copolymers. The hydrogel is formed with nanoparticles embedded therein to form a nanocomposite whose refractive index and modulus can be controlled by varying the amts. of nanoparticles and the polymer concentration of the hydrogel, resp. Thus, poly[acrylamide-bis(acryloyl)cystamine] hydrogels were prepared and reduced to obtain water-soluble copolymer with pendant thiol groups. The polymer was

used to prepare the hydrogel nanocomposites with three different type of nanoparticle and regelled through the thiol-disulfide exchange reaction. Nanocomposite-containing nanoparticles which did not react with the thiol polymer yielded hydrogel nanocomposite having high refractive index with lower moduli.

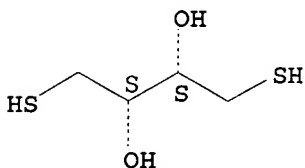
IT 3483-12-3, Dithiothreitol 6892-68-8,  
Dithioerythritol

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reversible polymeric hydrogel nanocomposites for intraocular lenses)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

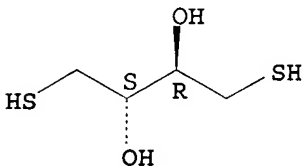
Relative stereochemistry.



RN 6892-68-8 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



INCL 424429000; 424486000; 424078350; 977904000

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

IT **Polyelectrolytes**

(anionic; reversible polymeric hydrogel nanocomposites for intraocular lenses)

IT **Polyelectrolytes**

(cationic; reversible polymeric hydrogel nanocomposites for intraocular lenses)

IT 52-90-4, Cystein, reactions 60-24-2, 2-Mercaptoethanol 109-79-5,  
Butanethiol 3483-12-3, Dithiothreitol 6892-68-8,  
Dithioerythritol 7782-44-7, Oxygen, reactions 16940-66-2, Sodium  
borohydride 33195-00-5, Cyanoborohydride

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reversible polymeric hydrogel nanocomposites for intraocular lenses)

L46 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1252451 HCAPLUS

TITLE: Anionic membrane based on polyepichlorhydrin  
matrix for alkaline fuel cell: Synthesis,  
physical and electrochemical properties

AUTHOR(S): Stoica, D.; Ogier, L.; Akrou, L.; Alloin, F.;  
Fauvarque, J.-F.

CORPORATE SOURCE: UMR 5631 CNRS-INPG-UJF, Laboratoire  
d'Electrochimie et de Physico-chimie des  
Materiaux et des Interfaces-LEPMI,  
Saint-Martin-d'Heres, 38402, Fr.

SOURCE: Electrochimica Acta (2007), 53(4), 1596-1603  
CODEN: ELCAAV; ISSN: 0013-4686

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polymer electrolytes, using a poly(epichlorohydrin-allyl glycidyl ether) copolymer as matrix, were prepared and characterized. Anion conducting networks were obtained by the incorporation of two cyclic diamines named 1,4-diazabicyclo-[2.2.2]-octane (DABCO) and 1-azabicyclo-[2.2.2]-octane (Quinuclidine), neither sensitive to Hoffman elimination. To improve the mech. properties, the membrane was reinforced using polyamide supports. The physicochem. and electrochem. characteristics, ionic exchange capacity, swelling ratio, glass transition temperature, thermal stability and ionic conductivity, were evaluated.

IT 1191-43-1DP, 1,6-Hexanedithiol, crosslinked reaction products with salt reaction products of allyl glycidyl ether-epichlorohydrin rubber with DABCO and Quinuclidine water\_sorption\_capacity  
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(anionic membrane based on polyepichlorohydrin matrix for alkaline fuel cell: synthesis, phys. and electrochem. properties)

RN 1191-43-1 HCAPLUS

CN 1,6-Hexanedithiol (CA INDEX NAME)

HS- (CH<sub>2</sub>)<sub>6</sub>-SH

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

IT Anion exchange membranes  
Cation exchange membranes  
Fuel cell separators  
Interpenetrating polymer networks  
Ion exchange  
Mechanical properties  
Polyelectrolytes  
Polymer morphology  
Polymer networks  
Solid electrolytes  
(anionic membrane based on polyepichlorohydrin matrix for alkaline fuel cell: synthesis, phys. and electrochem. properties)

IT 100-76-5DP, Quinuclidine, salt reaction products with epichlorohydrin-allyl glycidyl ether rubber, DABCO, and then also crosslinked by hexanedithiol 280-57-9DP, DABCO, salt reaction products with epichlorohydrin-allyl glycidyl ether rubber, Quinuclidine, and then also crosslinked by hexanedithiol 1191-43-1DP, 1,6-Hexanedithiol, crosslinked reaction products with salt reaction products of allyl glycidyl ether-epichlorohydrin rubber with DABCO and Quinuclidine water\_sorption\_capacity  
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(anionic membrane based on polyepichlorohydrin matrix for alkaline fuel cell: synthesis, phys. and electrochem. properties)

L46 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:642874 HCAPLUS

DOCUMENT NUMBER: 147:58349

TITLE: Methods and compositions for drug delivery enhancement

INVENTOR(S): Hilfinger, John; Roessler, Blake; Kish, Phillip

PATENT ASSIGNEE(S): Tsrl, Inc., USA; The Regents of the University of Michigan

SOURCE: PCT Int. Appl., 59pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007067779	A2	20070614	WO 2006-US47069	20061208

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2005-748390P P 20051208

OTHER SOURCE(S): MARPAT 147:58349

AB A method is provided for the delivery of a therapeutic to epithelial cells through the use of a bile acid conjugated to a peptide, the peptide being ionically charged at physiolo. pH. The complex is well suited for oral and other forms of therapeutic administration of therapeutic drugs known in the art in order to exact systemic and/or localized effect. Intestinal epithelial cells, as well as non-epithelial cells within the gastrointestinal tract and other target cells receive with greater efficiency a charged therapeutic when delivered with an oppositely charged bile acid conjugate (BAC) through oral administration, direct injection, or infusive administrations, thereby increasing bioavailability.

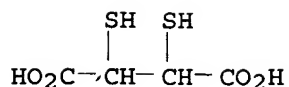
IT 2418-14-6, Dimercaptosuccinic acid

RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methods and compns. for drug delivery enhancement)

RN 2418-14-6 HCAPLUS

CN Butanedioic acid, 2,3-dimercapto- (CA INDEX NAME)



- CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1, 2, 18
- IT **Polyelectrolytes**  
(cationic; methods and compns. for drug delivery enhancement)
- IT 50-53-3, Chlorpromazine, biological studies 50-59-9, Cephaloridine  
50-78-2, Aspirin 51-06-9, Procainamide 52-53-9, Verapamil  
52-67-5, Penicillamine 53-86-1, Indomethacin 54-31-9, Furosemide  
55-65-2, Guanethidine 56-54-2, Quinidine 57-27-2, Morphine,  
biological studies 58-54-8, Ethacrynic acid 59-05-2,  
Methotrexate 59-92-7, biological studies 59-96-1,  
Phenoxybenzamine 60-40-2, Mecamylamine 61-32-5, Methicillin  
61-33-6, Benzylpenicillin, biological studies 61-68-7, Mefenamic  
acid 61-72-3, Cloxacillin 66-79-5, Oxacillin 69-53-4,  
Ampicillin 69-72-7, Salicylic acid, biological studies 77-19-0,  
Dicyclomine 86-54-4, Hydralazine 90-82-4, Pseudoephedrine  
94-24-6, Tetracaine 99-66-1, Valproic acid 113-45-1,  
Methylphenidate 130-95-0, Quinine 132-60-5, Cinchophen  
137-58-6, Lidocaine 141-01-5, Ferrous fumarate 147-52-4,  
Nafcillin 147-55-7, Phenethicillin 148-82-3, Melphalan  
299-29-6, Ferrous gluconate 363-24-6, Prostaglandin E2 389-08-2,  
Nalidixic acid 396-01-0, Triamterene 471-34-1, Calcium  
carbonate, biological studies 484-23-1, Dihydralazine 525-66-6,  
Propranolol 530-78-9, Flufenamic acid 546-88-3, Acetohydroxamic  
acid 551-11-1 552-94-3, Salicylsalicylic acid 555-30-6,  
Methyldopa 644-62-2, Meclofenamic acid 657-24-9, Metformin  
738-70-5, Trimethoprim 745-65-3, Prostaglandin E1 768-94-5,  
Amantadine 1309-42-8, Magnesium hydroxide 1319-82-0,  
Aminocaproic acid 1403-66-3, Gentamycin 1404-90-6, Vancomycin  
1553-60-2, Ibuprofen 2418-14-6, Dimercaptosuccinic acid  
2609-46-3, Amiloride 2809-21-4, Etidronic acid 3116-76-5,  
Dicloxacillin 3440-28-6, Betamipron 3485-14-1, Cyclacillin  
3511-16-8, Hetacillin 3577-01-3, Cephaloglycin 4205-90-7,  
Clonidine 4394-00-7, Niflumonic acid 4428-95-9, Fosarnet  
4697-36-3, Carbenicillin 5104-49-4, Flurbiprofen 5250-39-5,  
Flucloxacillin 5728-52-9, 4-Biphenylacetic acid 6735-59-7,  
Pralidoxime 6893-02-3, Liothyronine 7220-56-6, Flutiazin  
7439-89-6D, Iron, -polysaccharide complex 7720-78-7, Ferrous  
sulfate 10206-21-0, Cephacetrile 10540-29-1, Tamoxifen  
10596-23-3, Clodronic acid 11111-12-9, Cephalosporin 13710-19-5,  
Tolfenamic acid 14611-51-9, Selegiline 14698-29-4, Oxolinic acid  
15307-86-5, Diclofenac 15686-71-2, Cephalexin 15687-27-1,  
Ibuprofen 16110-51-3, Cromolyn 16662-47-8, Gallopamil  
17243-38-8, Azidocillin 17692-38-5, Fluprofen 17737-65-4,  
Clonixin 17969-20-9, Fenclozic acid 19216-56-9, Prazosin  
19562-30-2, Piromidic acid 20168-99-4, Cinmetacin 20830-75-5,  
Digoxin 20830-81-3, Daunorubicin 21256-18-8, Oxaprozin  
21645-51-2, Aluminum hydroxide, biological studies 22071-15-4,  
Ketoprofen 22131-79-9, Alclofenac 22204-53-1, Naproxen  
22494-27-5, Flufenisal 22494-42-4, Diflunisal 23214-92-8,  
Doxorubicin 23887-31-2, Clorazepate 24209-51-6, Cephaneone  
24280-93-1, Mycophenolic acid 25395-22-6, o-  
(Carbamoylphenoxy)acetic acid 25803-14-9, Clometacin 25953-19-9,  
Cefazolin 26171-23-3, Tolmetin 26774-90-3, Epicillin  
26787-78-0, Amoxycillin 26839-75-8, Timolol 26973-24-0,

Ceftezole 27025-49-6, Carfecillin 28657-80-9, Cinoxacin 29110-47-2, Guanfacine 29122-68-7, Atenolol 29679-58-1, Fenoprofen 31036-80-3, Lofexidine 31793-07-4, Pirprofen 31842-01-0, Indoprofen 32808-51-8, Bucloxic acid 33005-95-7, Tiaprofenic acid 34444-01-4, Cefamandole 34645-84-6, Fenclofenac 34787-01-4, Ticarcillin 35121-78-9, Epoprostenol 35531-88-5, Carindacillin 35607-66-0, Cefoxitin 36330-85-5, Fenbufen 36505-82-5, Prodic acid 37091-66-0, Azlocillin 38194-50-2, Sulindac 38821-53-3, Cephadrine 38873-55-1, Furobufen 39718-89-3, Alminoprofen 39746-25-3, 16,16-Dimethylprostaglandin E2 40034-42-2, Rosoxacin 40391-99-9, Pamidronic acid 40828-46-4, Suprofen 41340-25-4, Etodolac 41744-40-5, Sulbenicillin 42794-76-3, Midodrine 42835-25-6, Flumequine 50370-12-2, Cefadroxil 51384-51-1, Metoprolol 51481-65-3, Mezlocillin 51627-14-6, Cefatrizine 51762-05-1, Cefroxadine 51940-44-4, Pipemidic acid 53164-05-9, Acemetacin 53230-10-7, Mefloquine 53714-56-0, Leuprolide 53716-49-7, Carprofen 53808-88-1, Lonazolac 53994-73-3, Cefaclor 54182-58-0, Sucralfate 55268-75-2, Cefuroxime 55985-32-5, Nicardipine 56187-47-4, Cefazedone 56420-45-2, Epirubicin 56796-20-4, Cefmetazole 57576-52-0, Thromboxane A2 58665-96-6, Cefazaflur 58957-92-9, Idarubicin 60142-96-3, Gabapentin 60925-61-3, Ceforanide 61263-35-2, Meteneprost 61270-58-4, Cefonicid 61477-96-1, Piperacillin 61622-34-2, Cefotiam 62571-86-2, Captopril 62587-73-9, Cefsulodin 62893-19-0, Cefoperazone 63469-19-2, Apalcillin 63527-52-6, Cefotaxime 63590-64-7, Terazosin 64221-86-9, Imipenem 64228-79-1, Atracurium 64952-97-2, Latamoxef 65085-01-0, Cefmenoxime 65271-80-9, Mitoxantrone 66104-22-1, Pergolide 66148-78-5, Temocillin 66357-35-5, Ranitidine 66376-36-1, Alendronic acid 66711-21-5, Apraclonidine 68047-06-3, 4-Hydroxytamoxifen 68401-81-0, Ceftizoxime 68475-42-3, Anagrelide 68666-91-1, 15-Deoxy-16-hydroxy-16-vinyl PGE2 68767-14-6, Loxoprofen 69712-56-7, Cefotetan 69739-16-8, Cefodizime 70458-92-3, Pefloxacin 70458-96-7, Norfloxacin 70797-11-4, Cefpiramide 71097-83-1, Nileprost 73384-59-5, Ceftriaxone 73573-88-3, Mevastatin 74011-58-8, Enoxacin 74103-06-3, Ketorolac 74191-85-8, Doxazosin 74863-84-6, Argatroban 75225-51-3, Lovastatin acid 75438-57-2, Moxonidine 76420-72-9, Enalaprilat 76547-98-3, Lisinopril 76610-84-9, Cefbuperazone 78110-38-0, Aztreonam 79350-37-1, Cefixime 79617-96-2, Sertraline 79660-72-3, Fleroxacin 79902-63-9, Simvastatin 80210-62-4, Cefpodoxime 81093-37-0, Pravastatin acid 81403-80-7, Alfuzosin 81845-44-5, Ciprostone 82419-36-1, Ofloxacin 82626-48-0, Zolpidem 82768-85-2, Quinaprilat 83602-05-5, Spiraprilat 84880-03-5, Cefpimizole 84957-29-9, Cefpirome 84957-30-2, Cefquinome 85721-33-1, Ciprofloxacin 86541-78-8, Benazeprilat 87269-97-4, Ramiprilat 87679-71-8, Trandolaprilat 88040-23-7, Cefepime 88150-42-9, Amlodipine

RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methods and compns. for drug delivery enhancement)

L46 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:450640 HCAPLUS

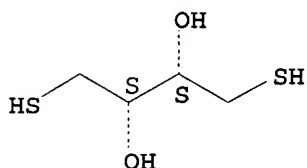
DOCUMENT NUMBER: 147:53679

TITLE: A cleavable-polycation template method for the fabrication of noncrosslinked, porous polyelectrolyte multilayered films

AUTHOR(S): Chen, Jun; Xia, Xi-Ming; Huang, Shi-Wen; Zhuo,

Ren-Xi  
 CORPORATE SOURCE: Key Laboratory of Biomedical Polymers, Ministry  
 of Education Department of Chemistry, Wuhan  
 University, Wuhan, 430072, Peop. Rep. China  
 SOURCE: Advanced Materials (Weinheim, Germany) (2007),  
 19(7), 979-983  
 CODEN: ADVMEW; ISSN: 0935-9648  
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Porous, noncrosslinked **polyelectrolyte**-complex thin films  
 (see figure), which will find applications in biomedicine, for  
 example for drug or gene delivery, are achieved by using a simple,  
 mild, and efficient method. Layer-by-layer assembly of polyanion  
 and a blend of two polycations is followed by removal of the  
 reductively degradable polycation template in the multilayered film  
 in dithiothreitol solution  
 IT 3483-12-3, 1,4-Dithiothreitol  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (fabrication of porous **polyelectrolyte** multilayered  
 films using cleavable-polycation template method)  
 RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



CC 38-3 (Plastics Fabrication and Uses)  
 ST polycation template method porous **polyelectrolyte**  
 multilayered film fabrication  
 IT **Polyelectrolytes**  
 (cationic; fabrication of porous **polyelectrolyte**  
 multilayered films using cleavable-polycation template method)  
 IT **Polyelectrolytes**  
 Templates  
 (fabrication of porous **polyelectrolyte** multilayered  
 films using cleavable-polycation template method)  
 IT Porous materials  
 (films; fabrication of porous **polyelectrolyte**  
 multilayered films using cleavable-polycation template method)  
 IT Phosphates, uses  
 Silanes  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (in buffer; fabrication of porous **polyelectrolyte**  
 multilayered films using cleavable-polycation template method)  
 IT Films  
 (multilayer; fabrication of porous **polyelectrolyte**  
 multilayered films using cleavable-polycation template method)  
 IT Films  
 (porous; fabrication of porous **polyelectrolyte**  
 multilayered films using cleavable-polycation template method)  
 IT 25704-18-1, Poly(sodium 4-styrenesulfonate)  
 RL: PEP (Physical, engineering or chemical process); PRP



(Properties); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(fabrication of porous **polyelectrolyte** multilayered  
films using cleavable-polycation template method)  
IT 3483-12-3, 1,4-Dithiothreitol  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(fabrication of porous **polyelectrolyte** multilayered  
films using cleavable-polycation template method)  
IT 14808-60-7, Quartz, miscellaneous  
RL: MSC (Miscellaneous)  
(substrate; fabrication of porous **polyelectrolyte**  
multilayered films using cleavable-polycation template method)  
IT 940892-01-3 940892-02-4  
RL: MSC (Miscellaneous)  
(template; fabrication of porous **polyelectrolyte**  
multilayered films using cleavable-polycation template method)  
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L46 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2007:332643 HCAPLUS  
DOCUMENT NUMBER: 146:350152  
TITLE: Printing liquid solution arrays for inorganic  
combinatorial libraries  
INVENTOR(S): Dong, Yi; Cheng, Shifan; Tao, Dejie; Li, Yi-Qun  
PATENT ASSIGNEE(S): Intematix Corporation, USA  
SOURCE: U.S. Pat. Appl. Publ., 19pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007065947	A1	20070322	US 2005-231309	20050919
WO 2007035636	A2	20070329	WO 2006-US36285	20060918
WO 2007035636	A3	20070927		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			

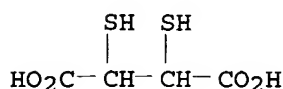
PRIORITY APPLN. INFO.: US 2005-231309 A  
20050919

AB This invention provides methods and systems to prepare replicate arrays from master arrays of liquid solns. Replicate arrays of liquid solns. can be reacted to form product solid inorg. material arrays for anal. and selection of optimum processes and products with desirable properties.

IT 2418-14-6, DMSA  
 RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)  
 (DMSA; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

RN 2418-14-6 HCAPLUS

CN Butanedioic acid, 2,3-dimercapto- (CA INDEX NAME)



INCL 436080000; 436518000; 427002110

CC 79-7 (Inorganic Analytical Chemistry)  
 Section cross-reference(s): 78

IT **Polyelectrolytes**  
 (anionic; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

IT **Polyelectrolytes**  
 (cationic; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

IT 2418-14-6, DMSA  
 RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)  
 (DMSA; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

L46 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:141458 HCAPLUS

DOCUMENT NUMBER: 146:428046

TITLE: Design, synthesis and evaluation of a novel polymer for gene delivery to mammalian cells

AUTHOR(S): Chittimalla, Chandrashekhhar; Dalkara, Deniz; Zuber, Guy

CORPORATE SOURCE: Laboratoire de Chimie Genetique, CNRS UMR 7175-LC1- Faculte de Pharmacie, Universite Louis Pasteur, Illkirch, 67401, Fr.

SOURCE: Letters in Drug Design & Discovery (2007), 4(2), 92-98

CODEN: LDDDAW; ISSN: 1570-1808

PUBLISHER: Bentham Science Publishers Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We rationally designed and synthesized a novel cationic polymer with intrinsic endosomolytic properties based on a semi-peptide monomer bridged by disulfide bonds. This polymer was shown to associate with DNA and to form polyplexes with gene transfection activity without addition of chloroquine, a known endosomolytic agent.

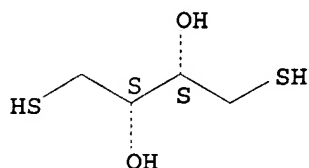
IT 3483-12-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(novel cationic polymer design, synthesis and evaluation for gene delivery to mammalian cells)

RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



CC 63-5 (Pharmaceuticals)  
 Section cross-reference(s): 3, 34, 35  
 IT **Polyelectrolytes**  
 (anionic; novel cationic polymer design, synthesis and evaluation  
 for gene delivery to mammalian cells)  
 IT **Polyelectrolytes**  
 (cationic; novel cationic polymer design, synthesis and  
 evaluation for gene delivery to mammalian cells)  
 IT 70-18-8, Glutathione, properties 3483-12-3 9007-28-7,  
 Chondroitin sulfate  
 RL: PEP (Physical, engineering or chemical process); PRP  
 (Properties); PROC (Process)  
 (novel cationic polymer design, synthesis and evaluation for gene  
 delivery to mammalian cells)  
 REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L46 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1348125 HCAPLUS

DOCUMENT NUMBER: 146:169041

TITLE: Visualization of the Degradation of a Disulfide  
 Polymer, Linear Poly(ethylenimine sulfide), for  
 Gene Delivery

AUTHOR(S): Lee, Yan; Mo, Heejung; Koo, Heebeom; Park,  
 Jong-Yeun; Cho, Min Yi; Jin, Geun-Woo; Park,  
 Jong-Sang

CORPORATE SOURCE: School of Chemistry and Molecular Engineering,  
 Seoul National University, Seoul, 151-742, S.  
 Korea

SOURCE: Bioconjugate Chemistry (2007), 18(1), 13-18  
 CODEN: BCCHES; ISSN: 1043-1802

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 146:169041

AB Polyethylenimine (PEI) shows high transfection efficiency and  
 cytotoxicity due to its high amine d. The new disulfide cationic  
 polymer, linear poly(ethylenimine sulfide) (l-PEIS), was synthesized  
 for efficient and safe gene delivery. As the amine d. of l-PEIS  
 increased, the transfection efficiency also increased. L-PEIS-6 and  
 l-PEIS-8 show transfection efficiencies that are similar to that of  
 PEI. However, cytotoxicity of l-PEIS was not observed due to the  
 biodegradable disulfide bond. The disulfide bonds are stable in the  
 oxidative extracellular condition and can be degraded rapidly in the  
 reductive intracellular condition. The degradation of l-PEIS in HeLa  
 cells was visualized by fluorescence microscopy using the

probe-probe dequenching effect of BODIPY-FL fluorescence dye.  
L-PEIS was degraded completely within 3 h.

IT' 920511-77-9P 920511-78-0P 920511-79-1P

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(biodegradable disulfide polymer, linear polyethylenimine sulfide, for gene delivery)

RN 920511-77-9 HCAPLUS

CN 3,6,9,12-Tetraazatetradecane-1,14-dithiol, homopolymer (CA INDEX NAME)

CM 1

CRN 920511-73-5

CMF C10 H26 N4 S2

PAGE 1-A

HS-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-

PAGE 1-B

-SH

RN 920511-78-0 HCAPLUS

CN 3,6,9,12,15,18-Hexaazaeicosane-1,20-dithiol, homopolymer (CA INDEX NAME)

CM 1

CRN 920511-74-6

CMF C14 H36 N6 S2

PAGE 1-A

HS-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-

PAGE 1-B

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RN 920511-79-1 HCAPLUS

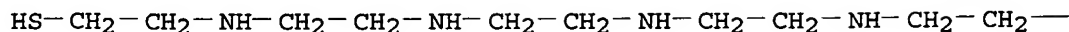
CN 3,6,9,12,15,18,21,24-Octaazahexacosane-1,26-dithiol, homopolymer (CA INDEX NAME)

CM 1

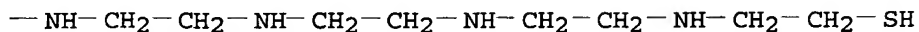
CRN 920511-75-7

CMF C18 H46 N8 S2

PAGE 1-A



PAGE 1-B



IT 84295-19-2P 920511-73-5P 920511-74-6P

920511-75-7P

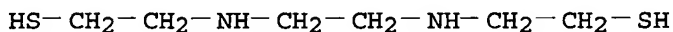
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(biodegradable disulfide polymer, linear polyethylenimine  
sulfide, for gene delivery)

RN 84295-19-2 HCAPLUS

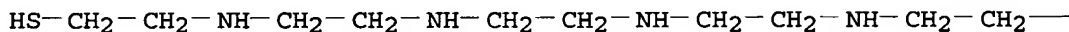
CN Ethanethiol, 2,2'-(1,2-ethanediyldiimino)bis- (CA INDEX NAME)



RN 920511-73-5 HCAPLUS

CN 3,6,9,12-Tetraazatetradecane-1,14-dithiol (CA INDEX NAME)

PAGE 1-A



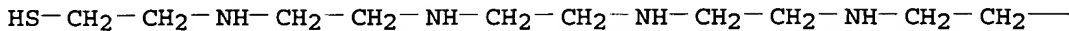
PAGE 1-B



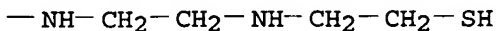
RN 920511-74-6 HCAPLUS

CN 3,6,9,12,15,18-Hexaazaeicosane-1,20-dithiol (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 920511-75-7 HCAPLUS

CN 3,6,9,12,15,18,21,24-Octaazahexacosane-1,26-dithiol (CA INDEX NAME)

PAGE 1-A

HS-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-

PAGE 1-B

-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-SH

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 35

IT **Polyelectrolytes**

(cationic; biodegradable disulfide polymer, linear polyethylenimine sulfide, for gene delivery)

IT 920511-76-8P 920511-77-9P 920511-78-0P

920511-79-1P 920511-80-4P 920511-82-6P 920511-84-8P  
920511-86-0P

RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(biodegradable disulfide polymer, linear polyethylenimine sulfide, for gene delivery)

IT 56234-52-7P 84295-19-2P 147382-34-1P 920511-64-4P

920511-65-5P 920511-66-6P 920511-67-7P 920511-68-8P

920511-69-9P 920511-70-2P 920511-71-3P 920511-72-4P

920511-73-5P 920511-74-6P 920511-75-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(biodegradable disulfide polymer, linear polyethylenimine sulfide, for gene delivery)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L46 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1017965 HCAPLUS

DOCUMENT NUMBER: 146:87093

TITLE: Disassembly of layer-by-layer films of plasmid DNA and reducible TAT polypeptide

AUTHOR(S): Blacklock, Jenifer; Handa, Hitesh; Soundara Manickam, Devika; Mao, Guangzhao; Mukhopadhyay, Ashis; Oupicky, David

CORPORATE SOURCE: Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 48202, USA

SOURCE: Biomaterials (2006), Volume Date 2007, 28(1), 117-124

CODEN: BIMADU; ISSN: 0142-9612

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This paper reports the disassembly of layer-by-layer (LbL) films of plasmid DNA and a reducible cationic polypeptide. To utilize a reducing microenvironment of cellular plasma membrane as a potential trigger, LbL films are assembled to contain both DNA and the TAT-based polypeptide (PTAT) with reducible disulfide bonds in the backbone. The assembly and disassembly processes are monitored by

goniometry, ellipsometry, and atomic force microscopy (AFM). The structure of the PTAT films is compared with that of non-reducible poly(L-lysine) (PLL) films. Both PTAT and PLL films exhibit exponential growth but with the contact angle alternating between characteristic values. Ellipsometry and AFM show a gradual and complete disassembly of the PTAT but not the PLL films in a 24 h period in the reducing environment in vitro. This study suggests a potential of using reducible LbL films for controlled DNA delivery.

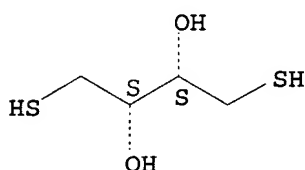
IT 3483-12-3, 1,4-Dithiothreitol

RL: PEP (Physical, engineering or chemical process); PROC (Process) (disassembly of layer-by-layer films of plasmid DNA and reducible TAT polypeptide)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 22

ST layer by layer DNA TAT polypeptide polyelectrolyte gene delivery

IT Contact angle

Gene therapy

Genetic vectors

**Polyelectrolytes**

Surface roughness

Thickness

(disassembly of layer-by-layer films of plasmid DNA and reducible TAT polypeptide)

IT 3483-12-3, 1,4-Dithiothreitol

RL: PEP (Physical, engineering or chemical process); PROC (Process) (disassembly of layer-by-layer films of plasmid DNA and reducible TAT polypeptide)

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:485676 HCAPLUS

DOCUMENT NUMBER: 144:489721

TITLE: Polymer actuators with increased displacement and treatment method for them

INVENTOR(S): Kato, Kenji; Sugiyama, Minoru

PATENT ASSIGNEE(S): Eamex Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006131816

A

20060525

JP 2004-324615

200411  
09

PRIORITY APPLN. INFO.:

JP 2004-324615

200411  
09

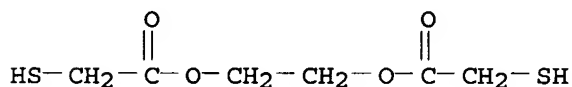
AB The treatment method, useful for multilayer polymer actuators containing ion-exchange resins as **polyelectrolytes**, includes immersing polymer actuators in C1-5 liquid organic compds. having  $\geq 1$  terminal amino group or thiol group, C3-7 liquid organic compds. having  $\geq 1$  terminal carboxyl group, or hydrazine and washing with water. Thus, immersing a carboxy-containing fluoropolymer (Flemion) sheet in methanol, then in an aqueous solution of dichloro(1,10-phenanthroline)gold chloride for 12 h, adsorbing, reducing with sodium sulfite so as to form a gold electrode, washing, and repeating these electrode-forming processes 3 times gave a multilayer actuator. The actuator was immersed in ethylamine for 30 min, then washed in water for 30 min to show increase in bend angle 80% in application of voltage.

IT 123-81-9, Ethylene glycol bis(mercaptoacetate)

RL: TEM (Technical or engineered material use); USES (Uses)  
(treating agent; treatment method for polymer actuators with increased displacement)

RN 123-81-9 HCAPLUS

CN Acetic acid, 2-mercapto-, 1,1'-(1,2-ethanediyl) ester (CA INDEX NAME)



CC 38-2 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

IT Actuators

Ion exchangers

**Polyelectrolytes**

(treatment method for polymer actuators with increased displacement)

IT 56-40-6, Glycine, uses 64-02-8, EDTA tetrasodium salt 67-42-5, GEDTA 68-11-1, Thioglycolic acid, uses 75-04-7, Ethylamine, uses 78-90-0, 1,2-Propanediamine 107-15-3, Ethylenediamine, uses 109-76-2, 1,3-Propanediamine 110-14-5, Succinic amide 110-15-6, Succinic acid, uses 110-85-0, Piperazine, uses 110-94-1, Glutaric acid 111-16-0, Pimelic acid 111-40-0, Diethylenetriamine 111-41-1 112-24-3, Triethylenetetramine 112-57-2, Tetraethylenepentamine 120-93-4, Ethyleneurea 123-81-9, Ethylene glycol bis(mercaptoacetate) 124-04-9, Adipic acid, uses 124-09-4, Hexamethylenediamine, uses 139-33-3, EDTA disodium salt 150-39-0 280-57-9, Triethylenediamine 302-01-2, Hydrazine, uses 505-48-6, Octanedioic acid 4067-16-7, Pentaethylenhexamine 7379-26-2, EDTA ammonium salt 7611-50-9 28631-79-0, Aminoethylpiperazine 69468-17-3, Butanediamine 80247-16-1, Diaminopentane

RL: TEM (Technical or engineered material use); USES (Uses)  
(treating agent; treatment method for polymer actuators with



increased displacement)

L46 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:404966 HCAPLUS  
 DOCUMENT NUMBER: 142:435061  
 TITLE: Polymer flocculant and its manufacture for  
 treatment of sludge or wastewater  
 INVENTOR(S): Fukushima, Hajime; Nishikawa, Kazuyoshi  
 PATENT ASSIGNEE(S): Sanyo Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005118723	A	20050512	JP 2003-358523	20031017
JP 3977794	B2	20070919	JP 2003-358523	20031017

PRIORITY APPLN. INFO.: JP 2003-358523

OTHER SOURCE(S): MARPAT 142:435061

AB The flocculant is manufactured by polymerizing water-soluble monomers in the presence of allylamine- and unsatd. carboxylic acid-containing amphoteric polymers, radical polymerization initiators, and chain transfer agents represented by D[(CO)pO(CO)qR1T]m (D = m-valent organic residue; R1 = C1-8 alkylene; T = chain transfer residue; p, q = 0, 1; p and q are not 1 at the same time; m = 2-8). Since the flocculant has high mol. weight and narrow mol. weight distribution, high flocculation rate and floc dewatering ratio are attained by using a small amount of the flocculant.

IT 14970-87-7P, Ethylene glycol-di-2-mercaptoethyl ether  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (chain transfer agent; polymer flocculant and its manufacture with chain transfer agent for treatment of sludge or wastewater)

RN 14970-87-7 HCAPLUS

CN Ethanethiol, 2,2'-[1,2-ethanediy]bis(oxy)]bis- (CA INDEX NAME)

HS-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-SH

IC ICM B01D021-01

ICS C02F001-56; C02F011-14; C08F002-44; C08F271-00

CC 60-2 (Waste Treatment and Disposal)

Section cross-reference(s): 37

IT Chain transfer agents

Flocculants

**Polyelectrolytes**

Wastewater treatment sludge

(polymer flocculant and its manufacture with chain transfer agent for treatment of sludge or wastewater)

IT 14970-87-7P, Ethylene glycol-di-2-mercaptoethyl ether

188441-90-9P, Pentaerythritol-tetra-2-mercaptoethyl ether  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP  
 (Preparation); USES (Uses)  
 (chain transfer agent; polymer flocculant and its manufacture with  
 chain transfer agent for treatment of sludge or wastewater)

L46 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:185371 HCAPLUS

DOCUMENT NUMBER: 142:257290

TITLE: System for sensitive and rapid determination of  
antimicrobial susceptibility

INVENTOR(S): Goldberg, David A.; Howson, David C.; Metzger,  
Steven W.; Buttry, Daniel A.; Saavedra, Steven  
Scott

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 94 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005048599	A1	20050303	US 2004-888828	20040708
AU 2004273783	A1	20050331	AU 2004-273783	20040708
CA 2532414	A1	20050331	CA 2004-2532414	20040708
WO 2005027714	A2	20050331	WO 2004-US22025	20040708
WO 2005027714	A3	20060921		
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1648286	A2	20060426	EP 2004-809482	20040708
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR			
JP 2007531863	T	20071108	JP 2006-520235	20040708
US 2007037225	A1	20070215	US 2005-303803	

PRIORITY APPLN. INFO.:	US 2003-486605P	P	200512 16
			200307 12
	US 2004-571479P	P	200405 13
	US 2004-888828	A2	200407 08
	WO 2004-US22025	W	200407 08
	US 2004-637423P	P	200412 16
	US 2004-638989P	P	200412 22

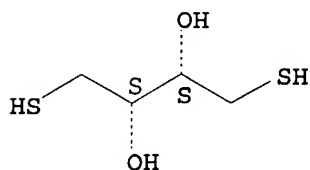
AB The present invention relates to moving microorganisms to a surface, where they are grown in the presence and absence of antimicrobials, and by monitoring the growth of the microorganisms over time in the two conditions, their susceptibility to the antimicrobials can be determined. The microorganisms can be moved to the surface through electrophoresis, centrifugation or filtration. When the movement involves electrophoresis, the presence of oxidizing and reducing reagents lowers the voltage at which electrophoretic force can be generated and allows a broader range of means by which the target can be detected. Monitoring can comprise optical detection, and most conveniently includes the detection of individual microorganisms. The microorganisms can be stained in order to give information about their response to antimicrobials.

IT 3483-12-3, Dithiothreitol 6892-68-8,  
Dithioerythritol  
RL: ARU (Analytical role, unclassified); DEV (Device component use);  
ANST (Analytical study); USES (Uses)  
(as reducing agent; system for sensitive and rapid determination of  
antimicrobial susceptibility)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

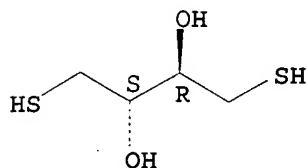
Relative stereochemistry.



RN 6892-68-8 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C12Q001-04

ICS C12M001-34

INCL 435034000; 435287100

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 1, 10

IT Aptamers

**Polyelectrolytes**

(as affinity component for microorganism; system for sensitive and rapid determination of antimicrobial susceptibility)

IT **Polyelectrolytes**

(cationic, as affinity component for microorganism; system for sensitive and rapid determination of antimicrobial susceptibility)

IT 50-81-7D, L-Ascorbic acid, compds. 70-18-8, Glutathione, analysis

102-54-5D, Ferrocene, compds. 1910-42-5, Methyl viologen

3483-12-3, Dithiothreitol 6892-68-8,

Dithioerythritol 13408-63-4D, Ferrocyanide, compds.

RL: ARU (Analytical role, unclassified); DEV (Device component use);

ANST (Analytical study); USES (Uses)

(as reducing agent; system for sensitive and rapid determination of antimicrobial susceptibility)

L46 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:654733 HCAPLUS

DOCUMENT NUMBER: 141:179731

TITLE: Reversible polymer hydrogel systems for medical uses

INVENTOR(S): Ravi, Nathan

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004156880	A1	20040812	US 2003-706081	20031113
CA 2542512	A1	20050317	CA 2004-2542512	20040903
WO 2005023331	A2	20050317	WO 2004-US28637	20040903
WO 2005023331	A3	20070503		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,

CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,  
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,  
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
 VC, VN, YU, ZA, ZM, ZW

RW: AP, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, EA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, EP, AT, BE, BG,  
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,  
 MC, NL, PL, PT, RO, SE, SI, SK, TR, OA, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2007517077 T 20070628 JP 2006-525445

200409  
03

US 2007269488 A1 20071122 US 2007-574667

200704  
05

PRIORITY APPLN. INFO.:

US 2002-425764P

P

200211  
13

US 2003-499887P

P

200309  
04

US 2003-706081

A

200311  
13

US 2004-564592P

P

200404  
23

WO 2004-US28637

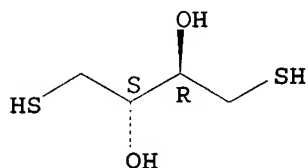
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200409  
03

AB The present invention relates to reversible hydrogel systems for medical applications. Particularly, the hydrogel of the present invention is made up of copolymers that can be a hydrogel when in an oxidized state and can be a solution when in a reduced state. A solution of the copolymer can be oxidized to form a hydrogel; and the hydrogel can be reduced to form a solution of the copolymer. The solution can be dehydrated to produce the dry copolymer for storage. Furthermore, the present invention also relates to methods of making and using the reversible hydrogel systems. For example, hydrogels of varying compns. were prepared from acrylamide (Aam) and N,N'-bis(acryloyl)cystamine (BAC) at 2, 4, and 6 acrylic mole percent of BAC with respect to acrylamide. Increasing the BAC resulted in gels with better structural integrity. Gels having higher amount of BAC were slightly less transparent. ABSS2, the copolymer containing disulfide bonds by incorporating 2 acrylic mole percent of BAC, did not form a stable gel but a viscous solution instead. However, stable gels were obtained at higher concns. (>15%). The feasibility of using thiol containing copolymers as injectable precursors for in vivo chemical crosslinking under physiol. conditions was demonstrated. In situ endocapsular hydrogel formation using reversible disulfide chemical is a promising technique, not only for developing injectable intraocular lenses but also for use as vitreous substitutes, and topical medicaments.

IT 6892-68-8, Dithioerythritol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reducing agent; reversible polymer hydrogel systems for medicinal uses)  
 RN 6892-68-8 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM A61F002-14  
 INCL 424427000; 623005140  
 CC 63-8 (Pharmaceuticals)  
 Section cross-reference(s): 35, 36  
 IT **Polyelectrolytes**  
 (anionic; reversible polymer hydrogel systems for medicinal uses)  
 IT **Polyelectrolytes**  
 (cationic; reversible polymer hydrogel systems for medicinal uses)  
 IT 52-90-4, Cystein, reactions 60-23-1, Mercaptoethylamine 60-24-2,  
 2-Mercaptoethanol 109-79-5, Butanethiol 128-53-0, Ethylmaleimide  
 6892-68-8, Dithioerythritol 16940-66-2, Sodium borohydride  
 33195-00-5, Cyanoborohydride 51805-45-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reducing agent; reversible polymer hydrogel systems for medicinal uses)

L46 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:349656 HCAPLUS  
 DOCUMENT NUMBER: 140:359285  
 TITLE: Waste reduction in production of leather  
 INVENTOR(S): Taeger, Tilman Luedecke; Pabst, Gunther;  
 Lamalle, Philippe; Hueffer, Stephan; Schroeder, Stefan  
 PATENT ASSIGNEE(S): BASF A.-G., Germany  
 SOURCE: Ger. Offen., 53 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 10249077	A1	20040429	DE 2002-10249077	200210 21
WO 2004038046	A1	20040506	WO 2003-EP11326	200310 14
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,				

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
 SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
 ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG  
 WO 2004037589 A2 20040506 WO 2003-EP11368  
 200310  
 14  
 WO 2004037589 A3 20040624  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
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 NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,  
 SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
 ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
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 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG  
 AU 2003273997 A1 20040513 AU 2003-273997  
 200310  
 14  
 EP 1556522 A1 20050727 EP 2003-757967  
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 14  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
 SK  
 EP 1556523 A2 20050727 EP 2003-785620  
 200310  
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 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
 SK  
 BR 2003015272 A 20050823 BR 2003-15272  
 200310  
 14  
 CN 1705756 A 20051207 CN 2003-80101747  
 200310  
 14  
 US 2007022541 A1 20070201 US 2005-529744  
 200503  
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 US 2006037148 A1 20060223 US 2005-531167  
 200504  
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 US 7250062 B2 20070731  
 US 2007143930 A1 20070628 US 2007-682924  
 200703  
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 PRIORITY APPLN. INFO.: DE 2002-10249077 A  
 200210  
 21

DE 2003-10319240	A	200304 28
WO 2003-EP11326	W	200310 14
WO 2003-EP11368	W	200310 14
US 2005-531167	A1	200504 11

AB The title process, requiring less waste disposal, uses  $\geq 2$  of the steps: addition of **polyelectrolytes**, treatment with aqueous baths containing salts of specified structure, use of defatting agents of specified structure, and tanning in the presence of dialdehydes. Leather was softened with alkoxylated alcs., limed with polyethylenimine (I), racemic dithiothreitol, and NaOH; delimed with aqueous surfactants, Basozym CM, and bates; and pickled and tanned with aqueous I, Lipoderm, GS 1 (tanning agent), Tamol NA, and salts.

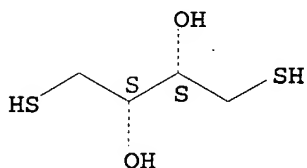
IT 3483-12-3

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
(waste reduction in production of leather)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C14C013-02

ICS C14C001-00; C14C003-00; C14C005-00

CC 45-2 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

ST leather prodn waste redn; **polyelectrolyte** leather prodn; polyethylenimine leather prodn; liming leather waste redn; deliming leather waste redn; tanning leather waste redn; dialdehyde tanning leather waste redn

IT Leather

**Polyelectrolytes**

Wastes

(waste reduction in production of leather)

IT 302-01-2D, Hydrazine, derivs. 1344-09-8, Sodium silicate

3483-12-3 7803-49-8, Hydroxylamine, processes 9002-98-6,

Polyethylenimine 9005-25-8D, Starch, cationic derivs.

25087-26-7, Poly(methacrylic acid) 25549-84-2, Poly(sodium

acrylate) 26677-99-6, Acrylic acid-maleic anhydride copolymer

681854-09-1, Lipoderm Licker A 1 681854-10-4, Lipoderm Licker LA

681854-12-6, Lipoderm Oil SK 681856-07-5, Basozyme L 10



RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
(waste reduction in production of leather)

L46 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:798402 HCAPLUS

DOCUMENT NUMBER: 139:311931

TITLE: Metal coating of hair fibers for cosmetics

INVENTOR(S): Vic, Gabin; Livoreil, Aude; Giroud, Franck

PATENT ASSIGNEE(S): L'oreal, Fr.

SOURCE: Fr. Demande, 18 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

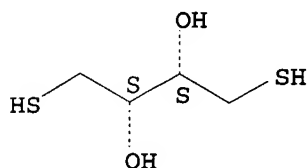
PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
FR 2838050	A1	20031010	FR 2002-4352	20020408
FR 2838050	B1	20060714		
CN 1449737	A	20031022	CN 2003-108449	20030331
BR 2003000873	A	20040817	BR 2003-873	20030403
EP 1352630	A2	20031015	EP 2003-290860	20030407
EP 1352630	A3	20040324		
EP 1352630	B1	20060301		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2003223944	A1	20031204	US 2003-407911	20030407
JP 2003300840	A	20031021	JP 2003-104420	20030408
JP 3759120	B2	20060322		
PRIORITY APPLN. INFO.:			FR 2002-4352	A 20020408
			US 2002-372455P	P 20020416

AB The invention relates to a treatment process which confers cosmetic properties on hair fibers. The process consists of treating the fibers with a metal salt in the presence of a reducing agent, directly on the fiber to form the corresponding free metal. Thus, a lock of hair after being shampooed, was dried and an aqueous solution of AgNO<sub>3</sub> was applied onto the hair. After the addition of NaBH<sub>4</sub>, the natural pigmented hair was dark, with metallic brilliance reflected

on it.

IT 3483-12-3, Dithiothreitol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (metal treatment of hair fibers for cosmetics)  
 RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM A61K007-075  
 CC 62-3 (Essential Oils and Cosmetics)  
 IT **Polyelectrolytes**  
 Surfactants  
 (amphoteric; metal treatment of hair fibers for cosmetics)  
 IT **Polyelectrolytes**  
 Surfactants  
 (cationic; metal treatment of hair fibers for cosmetics)  
 IT 50-81-7, Ascorbic acid, reactions 53-57-6, NaDPH 58-68-4, NaDH  
 68-11-1, Thioglycolic acid, reactions 77-92-9D, Citric acid, salts  
 106-51-4, 2,5-Cyclohexadiene-1,4-dione, reactions 123-31-9,  
 Hydroquinone, reactions 280-64-8, 9-BBN 1758-73-2,  
 Formamidinesulfinic acid 2885-00-9, 1-Octadecanethiol  
 3483-12-3, Dithiothreitol 6838-83-1, Diisoamylborane  
 7772-98-7 7775-14-6 7803-51-2, Phosphine 13762-51-1  
 14451-43-5 16853-85-3 16940-66-2 17836-88-3 25895-60-7,  
 Sodium cyanoborohydride 37318-49-3, Protein disulfide isomerase  
 56553-60-7 131760-67-3 145626-87-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (metal treatment of hair fibers for cosmetics)  
 REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L46 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:219991 HCAPLUS  
 DOCUMENT NUMBER: 138:385893  
 TITLE: Directed Reactions within Confined Reaction  
 Environments: Polyadditions in  
**Polyelectrolyte-Surfactant Complexes**  
 AUTHOR(S): . Ganeva, Desislava; Faul, Charl F. J.; Goetz,  
 Christian; Sanderson, Ronald D.  
 CORPORATE SOURCE: Department of Chemistry, Division of Polymer  
 Science, University of Stellenbosch, Matieland,  
 7602, S. Afr.  
 SOURCE: Macromolecules (2003), 36(8), 2862-2866  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Polyaddn. reactions performed within a highly ordered  
**polyelectrolyte-surfactant monomer complex** of  
 polydiallyldimethylammonium chloride and di(undecenyl) phosphate

give a 1:1 copy of the original lamellar host structure. No phase disruption or disordering occurs during the reaction. The phase morphol. of the host before and after swelling and after polymerization is investigated by small-angle X-ray scattering and transmission electron microscopy. The polymer symplex has an improved thermal and mech. stability.

IT 27517-53-9P, 1,6-Hexanedithiol homopolymer  
31324-94-4P, 1,9-Nonanedithiol homopolymer  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and characterization of di(undecenyl)  
phosphate-polydiallyldimethylammonium chloride complex as  
template for polymerization of dithiols)

RN 27517-53-9 HCAPLUS

CN 1,6-Hexanedithiol, homopolymer (CA INDEX NAME)

CM 1

CRN 1191-43-1

CMF C6 H14 S2

HS- (CH<sub>2</sub>)<sub>6</sub>-SH

RN 31324-94-4 HCAPLUS

CN 1,9-Nonanedithiol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3489-28-9

CMF C9 H20 S2

HS- (CH<sub>2</sub>)<sub>9</sub>-SH

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 46

ST **polyelectrolyte** surfactant complex prepn polymn dithiol;  
polydiallyldimethylammonium chloride diundecenyl phosphate complex  
dithiol polymn

IT. 27517-53-9P, 1,6-Hexanedithiol homopolymer  
31324-94-4P, 1,9-Nonanedithiol homopolymer 42557-05-1P,  
Poly(dithio-1,6-hexanediyl) 42557-06-2P, Poly(dithio-1,9-  
nonanediyl)

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and characterization of di(undecenyl)  
phosphate-polydiallyldimethylammonium chloride complex as  
template for polymerization of dithiols)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L46 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:97928 HCAPLUS

DOCUMENT NUMBER: 138:149370

TITLE: Reversed micellar systems, and their use for  
gene delivery to parenchymal cells

INVENTOR(S): Monahan, Sean D.; Wolff, Jon A.; Slattum, Paul  
M.; Hagstrom, James E.; Budker, Vladimir G.

PATENT ASSIGNEE(S): Mirus Corp., USA  
 SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of  
 U.S. 6,429,200.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2003027339	A1	20030206	US 2002-81461	200202 21
US 6673612	B2	20040106		
US 6429200	B1	20020806	US 1999-354957	199907 16
US 2004023393	A1	20040205	US 2003-627247	200307 25
US 7091041	B2	20060815		
US 2007010004	A1	20070111	US 2006-479587	200606 30
PRIORITY APPLN. INFO.:			US 1999-354957	A2 199907 16
			US 1998-93227P	P 199807 17
			US 1998-93321P	P 199807 20
			US 2002-81461	A3 200202 21
			US 2003-627247	A2 200307 25

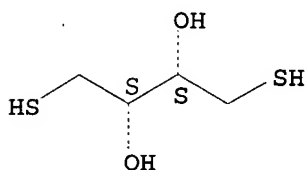
AB Disclosed herein are methods of preparing a gene delivery complex comprising solubilizing a nucleic acid into a reversed micelle with an internal water volume for delivery to parenchymal cells. Compds., such as polycations, which compact the nucleic acid can be added for easier delivery. Other mols., such as a surfactant having a disulfide bond, are used to interact with the nucleic acid-micelle complex to further enhance gene delivery.

IT 3483-12-3, Dithiothreitol  
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (use in micelle destruction; reversed micellar systems, and uses of surfactants to enhance their ability to deliver genes to parenchymal cells)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C12N015-88

ICS B01J013-02

INCL 435458000; 264004100

CC 6-7 (General Biochemistry)

Section cross-reference(s): 1, 3

IT **Polyelectrolytes**

(cationic; reverse micelles for delivery of nucleic acids)

IT 3483-12-3, Dithiothreitol

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(use in micelle destruction; reversed micellar systems, and uses of surfactants to enhance their ability to deliver genes to parenchymal cells)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:6160 HCAPLUS

DOCUMENT NUMBER: 138:88635

TITLE: Chimeric immunomodulatory compounds comprising nucleic acids linked through dendrimer or polysaccharide spacer and antigen for treating allergy, infection or cancer

INVENTOR(S): Fearon, Karen L.; Dina, Dino; Tuck, Stephen F.

PATENT ASSIGNEE(S): Dynavax Technologies Corporation, USA

SOURCE: PCT Int. Appl., 224 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000922	A2	20030103	WO 2002-US20025	20020621
WO 2003000922	A3	20031023		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI,			



\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 15-2 (Immunochemistry)

IT Microspheres

(cationic; chimeric immunomodulatory compds. comprising nucleic acids linked through dendrimer or polysaccharide spacer and antigen for treating allergy, infection or cancer)

01/28/2008

(chimeric immunomodulatory compds. comprising nucleic acids linked through dendrimer or polysaccharide spacer and antigen for treating allergy, infection or cancer)

L46 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:428665 HCAPLUS

DOCUMENT NUMBER: 137:10705

TITLE: Process for permanent reshaping of hair comprising thiol reducing composition

INVENTOR(S): Garnier, Nathalie; Burakov, Dina; Samain, Henri

PATENT ASSIGNEE(S): L'Oreal S.A., Fr.

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002043679	A2	20020606	WO 2001-US44490	20011129
WO 2002043679	A3	20030130		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002094321	A1	20020718	US 2000-725519	20001130
US 6623726	B2	20030923		
AU 2002026999	A5	20020611	AU 2002-26999	20011129
PRIORITY APPLN. INFO.:			US 2000-725519	A
				20001130
			WO 2001-US44490	W
				20011129

AB A process for permanently modifying the shape of hair by wrapping hair in multilayered, deformable sheets of material comprising a first layer of a perforated, deformable, and semi-rigid material, and a second layer of material containing a thiol reducing composition in an amount effective for permanently modifying the shape of hair, wherein the first layer is placed on or attached to the second layer; providing a desired shape to the multilayered, deformable sheet of material which is wrapped around the hair; and applying an oxidizing composition comprising an oxidizing agent capable of reconstituting the



disulfide bonds of the hair, wherein the oxidizing composition is applied either before or after liberating the hair from the multilayered, deformable sheet of material. In another variation, the hair is pre-treated with the reducing composition and then wrapped in a single deformable sheet for shaping. Multicomponent kits include a gelled reducing lotion containing thioglycolic acid and its disulfide.

IT 10604-70-3, Dimercaptoadipic acid  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (process for permanent reshaping of hair comprising thiol reducing composition)  
 RN 10604-70-3 HCAPLUS  
 CN Hexanebis(thioic) acid (CA INDEX NAME)

HSOC- (CH<sub>2</sub>)<sub>4</sub>-COSH

IC ICM A61K007-09  
 CC 62-3 (Essential Oils and Cosmetics)  
 IT **Polyelectrolytes**  
 (cationic; process for permanent reshaping of hair comprising thiol reducing composition)  
 IT 52-90-4, Cysteine, biological studies 60-23-1, Cysteamine  
 68-11-1, Thioglycolic acid, biological studies 79-42-5, Thiolactic acid 107-96-0,  $\beta$ -Mercaptopropionic acid 505-73-7  
 758-08-7, Thioglycolamide 7722-84-1, Hydrogen peroxide, biological studies 7727-21-1, Potassium persulfate 7758-01-2, Potassium bromate 7758-19-2, Sodium chlorite 7775-27-1, Sodium persulfate 10604-70-3, Dimercaptoadipic acid 11138-47-9, Sodium perborate 37265-25-1 38098-46-3, Monothioglycerol 80208-78-2, Glycerol thioglycolate 85112-98-7  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (process for permanent reshaping of hair comprising thiol reducing composition)

L46 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:885798 HCAPLUS

DOCUMENT NUMBER: 136:140458

TITLE: Formation of metallic minerals in the presence of natural exopolymers or lipids

AUTHOR(S): Hinze, U.; Thies, M.; Quitschau, P.; Scheidt, T.; Paradies, H. H.

CORPORATE SOURCE: Biotechnology & Physical Chemistry, University of Applied Sciences, Iserlohn, 58644, Germany

SOURCE: Process Metallurgy (2001), 11A, 85-94

CODEN: PMETEQ

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The formation of nano-clusters of zero-valent metals & alloys, e.g. Cu, Ag or FeCo (Fe<sub>26</sub>Co<sub>24</sub>) of sizes between 0.5 nm & 12 nm show surface plasma bands between 500-566 nm. The reduction of the metal salts to colloidal metals or to metal oxides of finite sizes in the presence of lipid A or exopolymers can be enhanced through addition of less than 10 mols. of dioctadecyldimethylammonium hydroxide per biosurfactant micelle in the presence of 10  $\mu$ M L-threo-1,4-dimercapto-2,3-dibutanediol. The addition of the cationic surfactant influences the shape and the size of the crystalline nanomaterials. Due to the low CMC of lipid A or the exopolymer which is not affected by the cationic surfactant, enables one to

produce discrete sizes of e.g. Cu or Fe oxides as nanocrystals revealing magnetic, recording and light sensitive properties.

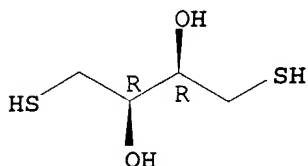
IT 16096-97-2

RL: MOA (Modifier or additive use); USES (Uses)  
(formation of metallic minerals in the presence of natural exopolymers or lipids)

RN 16096-97-2 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



CC 66-4 (Surface Chemistry and Colloids)  
Section cross-reference(s): 38, 75, 77

IT Annealing

Clusters

Hydration, chemical

Magnetic anisotropy

Magnetic field effects

Magnetism

Magnetization reversal

Nanoparticles

Neel temperature

Oxidation

Particle size

**Polyelectrolytes**

Reduction

Structural phase transition

Surface plasmon

(formation of metallic minerals in the presence of natural exopolymers or lipids)

IT 107-64-2, Dioctadecyldimethylammonium chloride 9005-32-7, Alginate acid 11138-66-2D, Xanthan, pyruvoylated 16096-97-2

51822-75-4, Dioctadecyldimethylammonium hydroxide 75366-64-2

RL: MOA (Modifier or additive use); USES (Uses)

(formation of metallic minerals in the presence of natural exopolymers or lipids)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:265250 HCAPLUS

DOCUMENT NUMBER: 134:285592

TITLE: Delayed-release dosage form containing  $\alpha$ -lipoic acid (derivatives)

INVENTOR(S): Schuhbauer, Hans; Pischel, Ivo; Bernkop-Schnuerch, Andreas

PATENT ASSIGNEE(S): SKW Trostberg A.-G., Germany

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

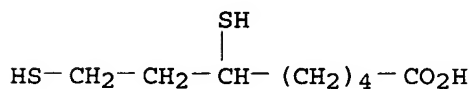
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001024795	A1	20010412	WO 2000-EP9585	20000929
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10045904	A1	20011115	DE 2000-10045904	20000916
DE 10045904	B4	20070712		
CA 2385867	A1	20010412	CA 2000-2385867	20000929
EP 1216043	A1	20020626	EP 2000-969359	20000929
EP 1216043	B1	20030507		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003510358	T	20030318	JP 2001-527794	20000929
AT 239469	T	20030515	AT 2000-969359	20000929
PT 1216043	T	20030930	PT 2000-969359	20000929
ES 2193111	T3	20031101	ES 2000-969359	20000929
PRIORITY APPLN. INFO.:				
			DE 1999-19947330	A 19991001
			DE 2000-10045904	A 20000916
			WO 2000-EP9585	W 20000929

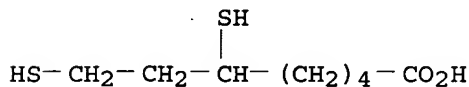
AB The invention relates to a delayed-release containing  $\alpha$ -lipoic acid (derivs.). The dosage form consists of at least 1 cationic polymer,  $\alpha$ -lipoic (derivs.) and at least 1 acid that is different from the lipoic acid. In addition to the controlled release of drugs for more than 8 h and prolonged GI transit times, an

accelerated penetration of the drugs occurs. The dosage form is associated with an increased bioavailability of  $\alpha$ -lipoic acid. Thus, 50 g chitosan was allowed to swell in 100 mL acetic acid and 750 mL water for 24 h.  $\alpha$ -Lipoic acid (50 g) was then added and homogenized and subjected to wet granulation. The dried granules were then compressed to tablets.

IT 462-20-4, Dihydrolipoic acid 462-20-4D,  
Dihydrolipoic acid, salts 98441-85-1 119365-69-4  
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(delayed-release dosage form containing  $\alpha$ -lipoic acid)  
RN 462-20-4 HCAPLUS  
CN Octanoic acid, 6,8-dimercapto- (CA INDEX NAME)

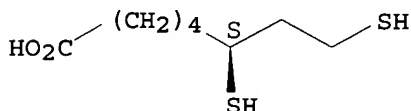


RN 462-20-4 HCAPLUS  
CN Octanoic acid, 6,8-dimercapto- (CA INDEX NAME)



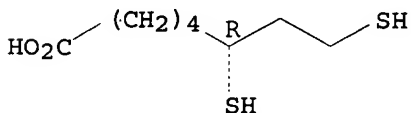
RN 98441-85-1 HCAPLUS  
CN Octanoic acid, 6,8-dimercapto-, (6S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 119365-69-4 HCAPLUS  
CN Octanoic acid, 6,8-dimercapto-, (6R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IC ICM A61K031-385  
ICS A61K009-20  
CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1, 7, 62  
IT **Polyelectrolytes**  
(cationic; delayed-release dosage form containing  $\alpha$ -lipoic acid)  
IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerin,  
biological studies 56-86-0, GLutamic acid, biological studies

57-55-6, Propylene glycol, biological studies 63-42-3, Lactose  
 64-19-7, Acetic acid, biological studies 69-65-8, Mannitol  
 102-76-1, Glycerin triacetate 115-77-5, Pentaerythritol,  
 biological studies 462-20-4, Dihydrolipoic acid  
 462-20-4D, Dihydrolipoic acid, salts 557-04-0 637-12-7,  
 Aluminum stearate 1077-27-6, (S)- $\alpha$ -Lipoic acid 1077-28-7,  
 1,2-Dithiolane-3-pentanoic acid 1077-28-7D, 1,2-Dithiolane-3-  
 pentanoic acid, salts 1200-22-2,  $\alpha$ -Lipoic acid 1309-48-4,  
 Magnesium oxide (MgO), biological studies 1343-93-7 1344-28-1,  
 Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), biological studies 1592-23-0, Calcium  
 stearate 7320-45-8 7631-86-9, Silica, biological studies  
 7647-01-0, Hydrochloric acid, biological studies 7790-76-3  
 9005-25-8, Starch, biological studies 9005-25-8D, Starch, derivs.,  
 biological studies 9012-76-4, Chitosan 9050-36-6, Maltodextrin  
 12207-88-4 13408-62-3 13463-67-7, Titanium oxide, biological  
 studies 14807-96-6, Talc, biological studies 15453-67-5  
 25104-18-1, Poly(L-lysine) 25395-31-7, Glycerin diacetate  
 26446-35-5, Glycerin monoacetate 38000-06-5, Poly(L-lysine)  
 70694-72-3, Chitosan hydrochloride 84563-76-8, Chitosan glutamate  
 87582-10-3, Chitosan acetate 98441-85-1  
 119365-69-4

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(delayed-release dosage form containing  $\alpha$ -lipoic acid)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L46 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:608442 HCAPLUS

DOCUMENT NUMBER: 133:190197

TITLE: Use of polycations in the stabilization and  
 extraction of nucleic acids

INVENTOR(S): Erbacher, Christoph; Bastian, Helge; Wyrich,  
 Ralf; Oelmuller, Uwe; Manz, Thomas

PATENT ASSIGNEE(S): Qiagen G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 49 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1031626	A1	20000830	EP 2000-103816	20000223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2299119	A1	20000823	CA 2000-2299119	20000222
JP 2000342259	A	20001212	JP 2000-45524	20000223
PRIORITY APPLN. INFO.:				EP 1999-103457 A
				19990223

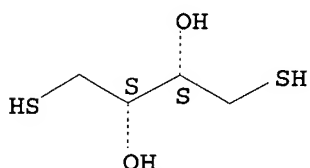
AB Polycations that can be used to stabilize nucleics during extraction and purification are described. The compds. have two closely-linked cationic centers, preferably nitrogens. Complexes between these polycations and nucleic acids are larger and sediment more rapidly than those prepared with prior art cationic polymers such as tetradecyltrimethylammonium oxalate. Use of the reagents to purify DNA and RNA from a number of sources is demonstrated.

IT 3483-12-3, Dithiothreitol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in cell lysis; use of polycations in stabilization and extraction of nucleic acids)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C12N015-10  
 ICS C07D295-037; C07C211-63

CC 9-9 (Biochemical Methods)  
 Section cross-reference(s): 3

IT **Polyelectrolytes**  
 (cationic; use of polycations in stabilization and extraction of nucleic acids)

IT 126-73-8, Tributyl phosphate, uses 3483-12-3,  
 Dithiothreitol 7664-38-2D, Phosphoric acid, derivs., uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in cell lysis; use of polycations in stabilization and extraction of nucleic acids)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L46 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:451475 HCAPLUS

DOCUMENT NUMBER: 133:185262

TITLE: Nano- and microengineering. Three-dimensional  
 colloidal photonic crystals prepared from  
 submicrometer-sized polystyrene latex spheres  
 pre-coated with luminescent  
**polyelectrolyte/nanocrystal shells**

AUTHOR(S): Rogach, Andrey; Susha, Andrei; Caruso, Frank;  
 Sukhorukov, Gleb; Kornowski, Andreas; Kershaw,  
 Steve; Mohwald, Helmut; Eychmuller, Alexander;  
 Weller, Horst

CORPORATE SOURCE: Institute of Physical Chemistry, University of  
 Hamburg, Hamburg, D-20146, Germany

SOURCE: Advanced Materials (Weinheim, Germany) (2000),  
 12(5), 333-337

CODEN: ADVMEW; ISSN: 0935-9648

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

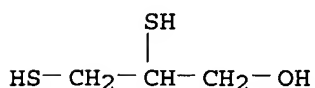
AB The fabrication of 3D colloidal photonic crystals is reported on. The crystals were prepared by the self-organization of submicrometer-sized polystyrene latex spheres. Consecutive electrostatic adsorption of charged **polyelectrolytes** and luminescent semiconductor CdTe and CdTe(S) nanocrystals were used to cover the polystyrene latex spheres. The uncovered and covered spheres were studied with TEM.

IT 59-52-9, Dithioglycerol

RL: RCT (Reactant); RACT (Reactant or reagent)  
(colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

RN 59-52-9 HCAPLUS

CN 1-Propanol, 2,3-dimercapto- (CA INDEX NAME)



CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 66, 76

IT Nanocrystals

Photonic crystals

(colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

IT Colloids

(crystalline; colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

IT Luminescence

UV and visible spectra

(of colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

IT 9003-53-6, Polystyrene

RL: NUU (Other use, unclassified); USES (Uses)

(colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

IT 1306-25-8, Cadmium telluride, properties 106495-64-1, Cadmium sulfide telluride

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

IT 59-52-9, Dithioglycerol 96-27-5, 1-Thioglycerol

RL: RCT (Reactant); RACT (Reactant or reagent)

(colloidal 3D photonic nanocrystals prepared from submicrometer-sized polystyrene latex spheres pre-coated with luminescent **polyelectrolyte**/nanocrystal shells)

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:731481 HCAPLUS  
 DOCUMENT NUMBER: 128:39545  
 TITLE: Hydrophobically-modified bioadhesive  
**polyelectrolytes** and methods relating  
 thereto  
 INVENTOR(S): Inoue, Tadaaki; Chen, Guohua; Hoffman, Allan S.  
 PATENT ASSIGNEE(S): University of Washington, USA  
 SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09286921	A	19971104	JP 1995-254421	199508 25
US 5770627	A	19980623	US 1995-515747	199508 16
PRIORITY APPLN. INFO.:			US 1995-515747	A 199508 16

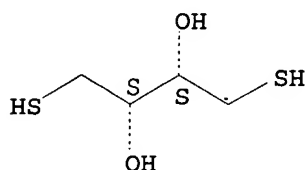
AB Hydrophobically-modified bioadhesive **polyelectrolytes** containing a bioadhesive **polyelectrolyte** and a hydrophobic component are disclosed. Also disclosed are **polyelectrolyte** -agent compns. wherein the hydrophobically-modified bioadhesive **polyelectrolyte** is loaded with a pharmaceutically, cosmetically or prophylactically acceptable agent [ e.g. doxorubicin-HCl].

IT 3483-12-3, DTT  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C08L101-00  
 ICS A61K047-32; C08F008-00; C08J005-18; C08L051-00; C08L053-00;  
 C08L067-02; C08L071-02; C08L075-04; C08L083-04; C08L101-08;  
 C08F020-04

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 38, 62

ST hydrophobically modified bioadhesive **polyelectrolyte**  
 pharmaceutical carrier; drug delivery system doxorubicin



IT Adhesives  
 (biol.; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (carriers; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (gels; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Dissolution rate  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

IT Peptides, biological studies  
 Proteins, general, biological studies  
 RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

IT **Polyelectrolytes**  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

IT Drug delivery systems  
 (ointments; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (oral; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (powders; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (solns.; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (systemic; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems  
 (topical; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)

IT 58-55-9P, Theophylline, biological studies 318-98-9P, Propranolol  
 hydrochloride 9001-63-2P, Lysozyme 25316-40-9P, Doxorubicin  
 hydrochloride  
 RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

IT 78-67-1, Aibn 3483-12-3, DTT 57757-57-0 122159-53-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**  
 as carriers for drugs or other products)

IT 9011-14-7DP, Poly(methyl methacrylate), amino-terminated  
 25322-25-2P, Acrylic acid-methyl methacrylate copolymer  
 26355-01-1DP, Hydroxyethyl methacrylate-methyl methacrylate  
 copolymer, amino-terminated 39921-94-3P 199606-95-6P  
 199606-97-8P 199606-99-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (hydrophobically-modified bioadhesive **polyelectrolytes**

as carriers for drugs or other products)

L46 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:224098 HCAPLUS  
 DOCUMENT NUMBER: 126:209293  
 TITLE: A colorimetric method of detecting thiol or  
 mercaptan compounds and its use for oral malodor  
 determination  
 INVENTOR(S): Kerschensteiner, Daniel A.  
 PATENT ASSIGNEE(S): The Oralife Group, Inc., Can.; Kerschensteiner,  
 Daniel, A.  
 SOURCE: PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9705482	A1	19970213	WO 1996-US12488	199607 30

W: CA, GB, US

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE

PRIORITY APPLN. INFO.: US 1995-1711P P  
 199507  
 31

AB The invention relates to a method for detecting the presence of thiol, mercaptans, sulfhydryl or volatile sulfur compds. in a sample and to reagents and reaction mixts. which can be used in detecting such compds. More particularly, it relates to colloidal metal sol suspensions which have a flocculated state visually distinguishable from a monodisperse suspended state and can be used in detecting thiol compds. The tensioned or sensitized state of colloidal metal sol suspensions are prepared and subsequently exposed to a sample which may contain thiol compds. The presence of such compds. can be determined by the color change of the soluble The reagents and reaction mixts. are used in the diagnosis of halitosis, as halitosis is related to the presence of thiol and volatile sulfur compds. in the breath sample of an individual. The invention also relates to halitosis diagnostic kits comprising a reagent or reaction mixture of the invention and a blow tube.

IT 3483-12-3, Dithiothreitol 6725-64-0, Methane dithiol

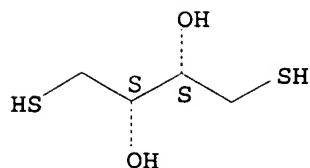
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study);  
 BIOL (Biological study); USES (Uses)

(colorimetric detection of thiol or mercaptan compds. in breath  
 in halitosis diagnosis)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 6725-64-0 HCAPLUS  
 CN Methanedithiol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

HS-CH<sub>2</sub>-SH

IC ICM G01N033-00  
 CC 9-5 (Biochemical Methods)  
 Section cross-reference(s): 14, 80  
 IT Detergents  
**Polyelectrolytes**  
 Respiratory air  
 (colorimetric detection of thiol or mercaptan compds. in breath  
 in halitosis diagnosis)  
 IT 52-90-4, Cysteine, analysis 60-23-1, 2-Mercaptoethylamine  
 60-24-2, 2-Mercaptoethanol 68-11-1, Mercaptoacetic acid, analysis  
 70-18-8, GSH, analysis 74-93-1, Methyl mercaptan, analysis  
 79-42-5, Thiolaetic acid 96-27-5, 3-Mercapto-1,2-propanediol  
 107-96-0, 3-Mercaptopropionic acid 147-93-3, Thiosalicylic acid  
 872-35-5, 2-Mercaptoimidazole 3375-50-6, 2-Mercaptoethanesulfonic  
 acid 3483-12-3, Dithiothreitol 6325-91-3,  
 2-Mercapto-5-nitrobenzimidazole 6725-64-0, Methane dithiol  
 7704-34-9D, Sulfur, compds., analysis 7783-06-4, Hydrogen sulfide,  
 analysis  
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study);  
 BIOL (Biological study); USES (Uses)  
 (colorimetric detection of thiol or mercaptan compds. in breath  
 in halitosis diagnosis)

L46 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:463682 HCAPLUS

DOCUMENT NUMBER: 122:215476

TITLE: Super ion conducting polymers for solid polymer  
 electrolytes

AUTHOR(S): Ogata, N.; Sanui, K.; Rikukawa, M.; Yamada, S.;  
 Watanabe, M.

CORPORATE SOURCE: Dep. Chem., Sophia Univ., Tokyo, 102, Japan

SOURCE: Synthetic Metals (1995), 69(1-3), 521-4

CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB New ion conductive polymer complexes were formed by dissolving  
 various polycation salts into room temperature molten salts containing AlCl<sub>3</sub>.  
 For viscoelastic films based on polypyridinium salts, the ionic  
 motion in the complexes was decoupled with the segmental motion of  
 the polypyridiniums. The ionic conductivities of the polymer  
 complexes were 10-100 times higher than poly(ethylene oxide)-based  
 polymers at room temperature and were affected by their composition Systems  
 based on polyvinylpyridinium salts exhibited higher and less temperature

dependent ion conductivities than the other solid polymer electrolytes.

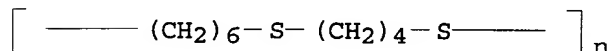
IT 71674-57-2P, 1,4-Dibromobutane-1,6-hexanedithiol copolymer, sru

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and ionic conductivity of quaternized polycations in molten aluminum chloride solns.)

RN 71674-57-2 HCAPLUS

CN Poly(thio-1,4-butanediylthio-1,6-hexanediyl) (9CI) (CA INDEX NAME)



CC 37-5 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 52, 76

IT **Polyelectrolytes**

(cationic, solid; preparation and ionic conductivity of quaternized polycations in molten aluminum chloride solns.)

IT 7446-70-0P, Aluminum chloride, preparation 26780-21-2P

28728-55-4P 31987-01-6P 60723-01-5P, 4,4'-Bipyridine-1,2-dibromoethane copolymer, sru 60747-55-9P, 4-Vinylpyridine

homopolymer compound with butyl bromide 68393-49-7P, 1,6-Hexane

dichloride-N,N,N',N'-tetramethyl-1,3-propylenediamine copolymer, sru

70876-96-9P, 4-Vinylpyridine homopolymer compound with butyl chloride

71674-57-2P, 1,4-Dibromobutane-1,6-hexanedithiol copolymer,

sru 71693-83-9P, 1,4-Dibromobutane-1,6-hexanedithiol copolymer

74551-38-5P, 4,4'-Bipyridine-1,2-dichloroethane copolymer, sru

84943-63-5P, 4,4'-Bipyridine-1,2-dibromoethane copolymer

145425-78-1P 162230-34-4P, 1,6-Hexane dichloride-N,N,N',N'-

tetramethyl-1,3-propylenediamine copolymer 162230-35-5P,

4,4'-Bipyridine-1,2-dichloroethane copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)

(preparation and ionic conductivity of quaternized polycations in molten aluminum chloride solns.)

L46 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:229746 HCAPLUS

DOCUMENT NUMBER: 118:229746

TITLE: Methods and reagents for performing ion-capture immunoassays for digoxin and other analytes

INVENTOR(S): Kline, Steven; Jou, Yi Her; Stroupe, Stephen D.

PATENT ASSIGNEE(S): Abbott Laboratories, USA

SOURCE: PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9221975	A1	19921210	WO 1992-US2997	19920410

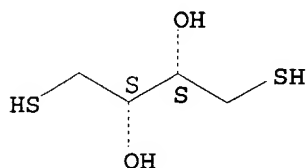
W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE			
CA 2110296	A1	19921210	CA 1992-2110296
			199204 10
EP 586574	A1	19940316	EP 1992-913231
			199204 10
EP 586574	B1	19971210	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE			
JP 06508214	T	19940914	JP 1992-500397
			199204 10
AT 161104	T	19971215	AT 1992-913231
			199204 10
ES 2112320	T3	19980401	ES 1992-913231
			199204 10
US 5459078	A	19951017	US 1993-74719
			199306 09
PRIORITY APPLN. INFO.:		US 1991-707483	A
			199105 30
		US 1988-150278	B2
			198801 29
		US 1989-375029	B2
			198907 07
		WO 1992-US2997	W
			199204 10

AB Digoxin assays are disclosed which use a capture reagent, involving a 1st binding member conjugated to a polymeric anion substance, and a solid-phase material containing a reaction site comprising a polymeric cation substance having a N content of  $\geq 2\%$ . A test sample suspected of containing the analyte may be contacted with the capture reagent to form a charged capture reagent-analyte complex. The complex is then contacted to the oppositely charged solid phase to attract, attach, and immobilize the complex. Thus, an immunoassay for digoxin (antigen capture format) used a digoxin-IgG-poly(glutamic acid) capture reagent (preparation described) and, as solid phase, a fiber matrix coated with Celquat L-200 (a polymeric pos. charged quaternary compound); the indicator reagent was alkaline phosphatase-conjugated anti-digoxin antibody. The assay procedure included incubation of digoxin samples (0-50.0 ng/mL; prepared in serum) with indicator reagent, addition of capture reagent, incubation, application to solid phase, washing, addition of enzyme substrate, and measurement of fluorescence. Results demonstrated that as the digoxin test sample concentration increased, there was a corresponding decrease in the formation of capture reagent-indicator reagent complex, and the amount of detectable label associated with the solid phase decreased. Ion-capture assays for carcinoembryonic antigen, mouse Ig, human chorionic gonadotropin, anti-progesterone antibody, etc. are also described.

IT 3483-12-3, 1,4-Dithiothreitol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polyglutamic acid-monoclonal  
 anti-carcinoembryonic antigen antibody conjugate preparation for  
 ion-capture immunoassay)  
 RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM G01N033-536  
 ICS G01N033-537; G01N033-538; G01N033-541; G01N033-543;  
 G01N033-544; G01N033-546; G01N033-551; G01N033-553  
 CC 9-10 (Biochemical Methods)  
 Section cross-reference(s): 1, 2, 15  
 IT **Polyelectrolytes**  
 (anionic, conjugates with specific-binding member, for  
 ion-capture immunoassay for digoxin)  
 IT **Polyelectrolytes**  
 (cationic, immobilized, for ion-capture specific-binding member  
 assay)  
 IT 69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 107-15-3,  
 1,2-Ethanediamine, reactions 2321-07-5, Fluorescein  
 3483-12-3, 1,4-Dithiothreitol 26247-79-0, Polyglutamic  
 acid sodium salt 58626-38-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polyglutamic acid-monoclonal  
 anti-carcinoembryonic antigen antibody conjugate preparation for  
 ion-capture immunoassay)

L46 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:142963 HCAPLUS

DOCUMENT NUMBER: 118:142963

TITLE: Devices for performing ion-capture binding  
 assays

INVENTOR(S): Jou, Yi Her; Stroupe, Stephen D.

PATENT ASSIGNEE(S): Abbott Laboratories, USA

SOURCE: PCT Int. Appl., 92 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9221980	A1	19921210	WO 1992-US2982	199204 10

W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE

CA 2110049	A1	19921210	CA 1992-2110049	199204 10
CA 2110049	C	20040810		
EP 641442	A1	19950308	EP 1992-911929	199204 10
EP 641442	B1	19971217		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
AT 161332	T	19980115	AT 1992-911929	199204 10
ES 2112906	T3	19980416	ES 1992-911929	199204 10
US 5670381	A	19970923	US 1995-436950	199505 08
PRIORITY APPLN. INFO.:			US 1991-708137	A 199105 30
			US 1988-150278	B2 198801 29
			US 1989-375029	B2 198907 07
			WO 1992-US2982	W 199204 10
			US 1994-233202	B1 199404 26

AB Assay devices are disclosed which employ a capture reagent, involving a specific-binding member attached to a charged substance, and a porous material containing a capture or reaction zone that is oppositely charged with respect to the capture reagent. In 1 embodiment, a test sample suspected of containing the analyte of interest is contacted with the capture reagent to form a charged capture reagent-complex. The complex is then contacted to the opp. charged capture or reaction zone to attract, attach, and immobilize the complex. With an appropriate indicator reagent, both sandwich and competitive assays can be performed. Thus, an immunoassay for digoxin (antigen capture format) used a digoxin-IgG-poly(glutamic acid) capture reagent (preparation described) and, as solid phase, a fiber matrix coated with Celquat L-200 ( a polymeric pos. charged quaternary compound); the indicator reagent was alkaline phosphatase-conjugated anti-dioxin antibody. The assay procedure included incubation of digoxin samples (0-50.0 ng/mL; prepared in serum) with indicator reagent, addition of capture reagent, incubation, application to solid phase, washing, addition of enzyme substrate, and measurement of fluorescence. Results demonstrated that as the digoxin test sample concentration increased, there was a corresponding decrease in the formation of capture reagent-indicator reagent complex, and the amount of detectable label associated with the solid

phase decreased. Ion-capture assays for carcinoembryonic antigen, mouse Ig, human chorionic gonadotropin, anti-progesterone antibody, etc. are also described.

IT 3483-12-3, 1,4-Dithiothreitol

RL: RCT (Reactant); RACT (Reactant or reagent)

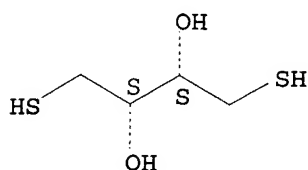
(reaction of, in polyglutamic acid-monoclonal

anti-carcinoembryonic antigen antibody conjugate preparation for ion-capture immunoassay)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM G01N033-566

ICS G01N033-543; G01N033-544; G01N033-545

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 1, 2, 15

IT **Polyelectrolytes**

(anionic, for ion-capture specific-binding assay)

IT 69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 107-15-3D,  
1,2-Ethanediamine, fluorescein reaction products, reactions  
2321-07-5D, Fluorescein, ethylenediamine reaction products  
3483-12-3, 1,4-Dithiothreitol 26247-79-0, Polyglutamic  
acid sodium salt 58626-38-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, in polyglutamic acid-monoclonal

anti-carcinoembryonic antigen antibody conjugate preparation for ion-capture immunoassay)

L46 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:99031 HCAPLUS

DOCUMENT NUMBER: 114:99031

TITLE: Studies on the decondensation of human, mouse,  
and bull sperm nuclei by heparin and other  
polyanions

AUTHOR(S): Jager, S.; Wijchman, J.; Kremer, J.

CORPORATE SOURCE: Dep. Obstet. Gynaecol., Univ. Hosp., Groningen,  
9713 EZ, Neth.

SOURCE: Journal of Experimental Zoology (1990), 256(3),  
315-22

CODEN: JEZAOO; ISSN: 0022-104X

DOCUMENT TYPE: Journal

LANGUAGE: English

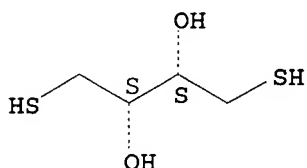
AB Heparin-induced decondensation of human, mouse, and bull sperm nuclei is reported. Decondensation did not occur if the spermatozoa were intact but only if the membranes were severely damaged by freezing and thawing or by treatment with a detergent. If a thiol was absent, decondensation of human sperm nuclei was usually a relatively slow process, with large interindividual variation. Mouse and bull sperm nuclei did not decondense in the absence of a thiol. With a thiol, relatively low concns. of heparin induced a rapid decondensation of the sperm nuclei of all 3 species. The



decondensation activity was not specific for heparin; other polyanions were also active, with heparin being the most effective compound. It is supposed that heparin and other polyanions induce sperm nuclear decondensation because they deplete protamines from the chromatin. Thus the neg. charged phosphate groups of the DNA are no longer opposed by pos. charged protamines. Consequently the mutual repulsion of unopposed phosphate groups causes the DNA mols. to stretch, which results in an increase of the sperm nuclear volume. Since heparin and other polyanions induce decondensation under physiol. pH and temperature, polyanions might also be active in the oocyte.

IT 3483-12-3, Dithiothreitol  
 RL: BIOL (Biological study)  
 (sperm nucleus decondensation by heparin and other polyanions enhancement by, in humans and laboratory animals)  
 RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



CC 13-6 (Mammalian Biochemistry)  
 Section cross-reference(s): 6  
 IT **Polyelectrolytes**  
 (anionic, sperm nucleus decondensation induction by, in humans and laboratory animals)  
 IT 3483-12-3, Dithiothreitol  
 RL: BIOL (Biological study)  
 (sperm nucleus decondensation by heparin and other polyanions enhancement by, in humans and laboratory animals)

L46 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:136571 HCAPLUS

DOCUMENT NUMBER: 110:136571

TITLE: Process for the reversible aggregation of particles

INVENTOR(S): Tarnowski, Thomas L.; Lin, Cheng I.; Ullman, Edwin F.

PATENT ASSIGNEE(S): Syntex (U.S.A.), Inc., USA

SOURCE: Ger. Offen., 17 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3816953	A1	19881208	DE 1988-3816953	19880518
FR 2615621	A1	19881125	FR 1988-6658	

198805  
18

JP 63314466 A 19881222 JP 1988-121680

198805  
18

GB 2206206 A 19881229 GB 1988-11751

198805  
18GB 2206206 B 19910925  
CA 1322067 C 19930907 CA 1988-567176198805  
18

US 5136095 A 19920804 US 1988-278870

198812  
01

US 5370993 A 19941206 US 1992-881987

199205  
12

US 5405743 A 19950411 US 1994-267636

199406  
29

PRIORITY APPLN. INFO.:

US 1987-51978 A

198705  
19

US 1988-278870 A3

198812  
01

US 1992-881987 A1

199205  
12

AB In the title process, useful in the separation of cells from; and anal. of, biol. fluids, the fluid is mixed with a polyionic polymer, left until particles aggregate, and the particles are treated with a reagent which cleaves the polymer, permitting the aggregation to reverse. Stirring 1.043 g (SCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>)<sub>2</sub> and 1.03 g Br(CH<sub>2</sub>)<sub>3</sub>Br in 4 mL DMSO at room temperature for 7 days gave an ionene polymer (I). A latex of 0.88 mg/mL particles of acrylated polystyrene was agglomerated by high-mol. weight I at concns. of 0.200 mg/L, but not at 0.050 mg/L, and the agglomeration was inhibited by the presence of 0.49 mM dithioerythritol.

IT 6892-68-8, Dithioerythritol

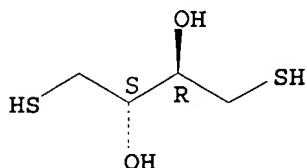
RL: USES (Uses)

(inhibitors, for reversible agglomeration of particles by  
**polyelectrolytes**)

RN 6892-68-8 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel- (CA<sub>9</sub> INDEX NAME)

Relative stereochemistry.



IC ICM C08G073-00  
ICS B01D021-01; B03C001-30; G01N027-00  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 9, 63  
ST agglomeration particle reversible **polyelectrolyte**; latex  
agglomeration reversible **polyelectrolyte**; ionene polymer  
agglomerating agent; cell agglomeration reversible  
**polyelectrolyte**; analysis particle agglomeration reversible;  
dithioerythritol inhibitor agglomeration reversible  
IT **Polyelectrolytes**  
Ionene polymers  
RL: USES (Uses)  
(agglomerating agents, for reversible agglomeration of particles)  
IT Blood  
(cell separation from, by reversible agglomeration with  
**polyelectrolytes**)  
IT Analysis  
(reversible agglomeration of particles by  
**polyelectrolytes** in)  
IT Magnetic substances  
(reversible agglomeration of particles by  
**polyelectrolytes** in presence of)  
IT Agglomeration  
(reversible, of particles by **polyelectrolytes**)  
IT Cell  
(separation of, from biol. fluids by reversible agglomeration with  
**polyelectrolytes**)  
IT 6892-68-8, Dithioerythritol 7790-28-5  
RL: USES (Uses)  
(inhibitors, for reversible agglomeration of particles by  
**polyelectrolytes**)

L46 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:110907 HCAPLUS

DOCUMENT NUMBER: 104:110907

ORIGINAL REFERENCE NO.: 104:17583a,17586a

TITLE: Preparation and characterization of polymeric  
solid electrolytes from poly(alkylene sulfides)  
and silver salts

AUTHOR(S): Clancy, S.; Shriver, D. F.; Ochrymowycz, L. A.

CORPORATE SOURCE: Mater. Res. Cent., Northwestern Univ., Evanston,  
IL, 60201, USA

SOURCE: Macromolecules (1986), 19(3), 606-11

CODEN: MAMOBX; ISSN: 0024-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polymeric solid electrolytes were prepared by complex formation  
between Ag salts and various poly(alkylene sulfides). The  
polymer-salt complexes of poly(pentamethylene sulfide) (I) [  
57514-73-5] and AgNO<sub>3</sub> had total ionic conductivities  
comparable to poly(ethylene oxide). IR spectroscopy indicated  
pairing between Ag<sup>+</sup> and NO<sub>3</sub><sup>-</sup> ions. The transference number for Ag<sup>+</sup> in  
I·AgNO<sub>3</sub>, .apprx.0.9, was much higher than that of most other  
polymeric solid electrolytes.

IT 28758-48-7DP, reaction products with silver nitrate

57514-73-5DP, reaction products with silver nitrate

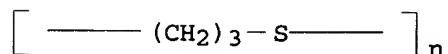
57514-74-6DP, reaction products with silver nitrate

RL: SPN (Synthetic preparation); PREP (Preparation)

(electrolytes, preparation and properties of)

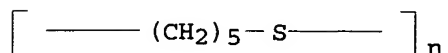
RN 28758-48-7 HCAPLUS

CN Poly(thio-1,3-propanediyl) (9CI) (CA INDEX NAME)



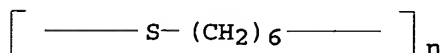
RN 57514-73-5 HCAPLUS

CN Poly(thio-1,5-pentanediy1) (9CI) (CA INDEX NAME)



RN 57514-74-6 HCAPLUS

CN Poly(thio-1,6-hexanediyl) (9CI) (CA INDEX NAME)



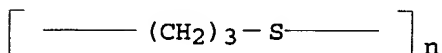
IT 28758-48-7P 57514-73-5P 57514-74-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)

(preparation and reaction of, with silver nitrate)

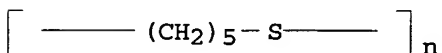
RN 28758-48-7 HCAPLUS

CN Poly(thio-1,3-propanediyl) (9CI) (CA INDEX NAME)



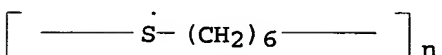
RN 57514-73-5 HCAPLUS

CN Poly(thio-1,5-pentanediy1) (9CI) (CA INDEX NAME)



RN 57514-74-6 HCAPLUS

CN Poly(thio-1,6-hexanediyl) (9CI) (CA INDEX NAME)



CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 35

ST polythioalkylene silver complex **polyelectrolyte**; elec cond  
 polythiopentamethylene silver; transference number  
 polythiopentamethylene silver

IT Transference number

(of poly(alkylene sulfide)-silver salt **polyelectrolytes**)

IT **Polyelectrolytes**

- (poly(alkylene sulfide)-silver salt complexes, preparation and properties of)
- IT Polythioalkylenes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(reaction products with silver compds., **polyelectrolytes**, preparation and properties of)
- IT Electric conductivity and conduction  
(ionic, of poly(alkylene sulfide)-silver salt **polyelectrolytes**)
- IT 2923-28-6DP, reaction products with poly(alkylene sulfides)  
7761-88-8DP, reaction products with poly(alkylene sulfides)  
24936-67-2DP, reaction products with silver nitrate 24937-37-9DP,  
reaction products with silver nitrate **28758-48-7DP**,  
reaction products with silver nitrate 37325-04-5DP, reaction  
products with silver nitrate **57514-73-5DP**, reaction  
products with silver nitrate **57514-74-6DP**, reaction  
products with silver nitrate 64773-31-5DP, reaction products with  
silver nitrate 64773-32-6DP, reaction products with silver nitrate  
99809-26-4DP, reaction products with silver nitrate 99809-27-5DP,  
reaction products with silver nitrate  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(electrolytes, preparation and properties of)
- IT 24936-67-2P 24937-37-9P **28758-48-7P** 37325-04-5P  
**57514-73-5P** **57514-74-6P** 64773-31-5P  
64773-32-6P 99809-26-4P 99809-27-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation and reaction of, with silver nitrate)

L46 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:527876 HCAPLUS

DOCUMENT NUMBER: 93:127876

ORIGINAL REFERENCE NO.: 93:20329a,20332a

TITLE: A flavoenzyme model: facile oxidation of thiols  
by a flavin immobilized in cationic  
**polyelectrolytes**

AUTHOR(S): Shinkai, Seiji; Yamada, Shinji; Ando, Reiko;  
Kunitake, Toyoki

CORPORATE SOURCE: Fac. Eng., Kyushu Univ., Fukuoka, 812, Japan

SOURCE: Bioorganic Chemistry (1980), 9(2), 238-47

CODEN: BOCMBM; ISSN: 0045-2068

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The reactions of a polymer-bound flavin with thiols  
(2-mercaptoethanol, glutathione, thiophenol, and 1,4-butanedithiol)  
are markedly accelerated, when compared with that of a monomeric  
flavin. The rate enhancements observed were 30- to 6000-fold. In  
particular, thiophenol, which had been believed not to be oxidized  
by flavin in nonenzymic systems, was oxidized most rapidly among the  
monothiols examined. The reaction rates were improved by incorporation  
of a dodecyl group into the flavin-containing polymer. Thus, the  
hydrophobic nature of the cationic polymer matrix was responsible  
for the large rate enhancement among other factors.

IT **1191-08-8**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, by immobilized flavins)

RN 1191-08-8 HCAPLUS

CN 1,4-Butanedithiol (CA INDEX NAME)

HS- (CH<sub>2</sub>)<sub>4</sub>-SH

CC 7-4 (Enzymes)  
IT 60-24-2 70-18-8, biological studies 108-98-5, biological studies  
1191-08-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, by immobilized flavins)

L46 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:71492 HCAPLUS  
DOCUMENT NUMBER: 90:71492  
ORIGINAL REFERENCE NO.: 90:11311a,11314a  
TITLE: Catalyses by polymer complexes. Part 3.  
Polymer micellar catalysis of isoalloxazine  
(flavin) oxidation of thiols  
AUTHOR(S): Shinkai, Seiji; Ando, Reiko; Kunitake, Toyoki  
CORPORATE SOURCE: Dep. Org. Synth., Kyushu Univ., Fukuoka, Japan  
SOURCE: Journal of the Chemical Society, Perkin  
Transactions 2: Physical Organic Chemistry  
(1972-1999) (1978), (12), 1271-7  
CODEN: JCPKBH; ISSN: 0300-9580

DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The polymers used in the title study were poly(2-ethyl-1-vinylimidazole) quaternized with EtBr and lauryl bromide [lauryl group content: 8.8 mol % (L-9), 28.9 mol % (L-29), and 40.9 mol % (L-41), resp.]. Addition of L-29 and L-41 caused a red shift of the UV absorption maximum of PhS- and an increase in its acid dissociation constant, whereas L-9 scarcely affected these values. Under anaerobic conditions, the oxidation of PhSH and HS(CH<sub>2</sub>)<sub>2</sub>OH by 10-ethyl-3-methylisoalloxazine in the presence of micelle-like polymers (L-29 and L-41) was 102-105 times faster than the corresponding reaction in a nonpolymeric system, whereas L-9, a polyelectrolyte-like polymer, produced almost no acceleration. The thiolate anion bound to the polymer domain is probably activated because of the formation of a hydrophobic ion pair. The oxidation of HS(CH<sub>2</sub>)<sub>4</sub>SH was little affected by the polymer micelle. The difference in mechanism of dithiol oxidation is discussed in connection with the microenvironmental effect.

IT 1191-08-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, by ethylmethylisoalloxazine, polymer  
micellar-catalyzed)  
RN 1191-08-8 HCAPLUS  
CN 1,4-Butanedithiol (CA INDEX NAME)

HS- (CH<sub>2</sub>)<sub>4</sub>-SH

CC 22-5 (Physical Organic Chemistry)  
Section cross-reference(s): 35  
IT 60-24-2 108-98-5, reactions 1191-08-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, by ethylmethylisoalloxazine, polymer  
micellar-catalyzed)

L46 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1971:477439 HCAPLUS

DOCUMENT NUMBER: 75:77439  
 ORIGINAL REFERENCE NO.: 75:12266h,12267a  
 TITLE: Estimation of the relative stiffness of the molecular chain in **polyelectrolytes** from measurements of viscosity at different ionic strengths  
 AUTHOR(S): Smidsroed, Olav; Haug, Arne  
 CORPORATE SOURCE: Norw. Inst. Seaweed Res., Nor. Tek. Hoegsk., Trondheim, Norway  
 SOURCE: Biopolymers (1971), 10(7), 1213-27  
 CODEN: BIPMAA; ISSN: 0006-3525  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

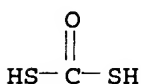
AB A method was developed for comparison of the stiffness of the chain in different **polyelectrolytes** (alginates, dextran sulfate, Na pectinates, Na polyacrylates, amylose xanthate, CM-celluloses, a polyphosphate, carboxymethyl amylose, and Na hyaluronate) from measurements of the intrinsic viscosity at different concns. of added monovalent (Na) salt. The response to salt was quant. expressed as the slope of straight lines relating the intrinsic viscosity to the reciprocal of the square-root of the ionic strength. This slope increased considerably with increasing mol. weight of the **polyelectrolyte**, and characterized the response to salt of different substances only when comparison was made at a constant mol. weight. An empirical parameter, B, which is the slope corresponding to an intrinsic viscosity of 1.0 at an ionic strength of 0.1M, could be correlated to the unperturbed dimensions of the mols. A method of extrapolation, enabling the determination of B from measurements of viscosity on only 1 sample of unknown mol. weight, was evaluated. The empirical correlation between B and some well established parameters of stiffness did not contrast with predictions from the "fuzzy-sphere model" of M. Fixman (1964) provided that reasonable assumptions regarding ion binding and the polymer-solvent interaction were made.

IT 4741-30-4D, Carbonic acid, dithio-, O-ester with amyloses  
 RL: PRP (Properties)

(viscosity of, mol. chain stiffness in relation to)

RN 4741-30-4 HCAPLUS

CN Carbonodithioic acid (9CI) (CA INDEX NAME)



CC 35 (Synthetic High Polymers)

ST carboxymethyl amylose mol chain stiffness; amylose xanthate mol chain stiffness; hyaluronate mol chain stiffness; **polyelectrolyte** mol chain stiffness; viscosity chain stiffness **polyelectrolyte**; alginate mol chain stiffness; dextran sulfate mol chain stiffness; pectinate mol chain stiffness; polyacrylate mol chain stiffness; CM cellulose mol chain stiffness; polyphosphate mol chain stiffness

IT Chains, chemical

(stiffness of, of **polyelectrolytes**, determination of)

IT **Polyelectrolytes**

(viscosity of, chain stiffness in relation to)

IT 4741-30-4D, Carbonic acid, dithio-, O-ester with amyloses

9000-11-7 9005-32-7D, Alginic acid, salts 9042-14-2, Dextrans,

sulfate  
RL: PRP (Properties)  
(viscosity of, mol. chain stiffness in relation to)

L46 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1965:74611 HCAPLUS

DOCUMENT NUMBER: 62:74611

ORIGINAL REFERENCE NO.: 62:13250e-g

TITLE: Experiments with a synthetic polyampholyte

AUTHOR(S): Allison, J. P.; Marvel, C. S.

CORPORATE SOURCE: Univ. of Arizona, Tucson

SOURCE: Journal of Polymer Science (1965), 3(1;Pt. A),  
137-44

CODEN: JPSCAU; ISSN: 0022-3832

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of the regular polyampholyte

[SS(CH<sub>2</sub>)<sub>2</sub>CH(NH<sub>2</sub>)(CH<sub>2</sub>)<sub>2</sub>CH(CO<sub>2</sub>)(CH<sub>2</sub>)<sub>2</sub>]<sub>n</sub> (I) (CA 55, 10310i; 52, 5291f) has been improved. The washed and dried I recovered from the amino acid salt was a hard brown material. It was insol. in Me<sub>2</sub>SO, HCONMe<sub>2</sub>, AcNMe<sub>2</sub>, Ac<sub>2</sub>CH<sub>2</sub>, Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>OH, C<sub>6</sub>H<sub>6</sub>, PhCl, pyridine, quinoline, HC(OMe)<sub>3</sub>, (MeOCH<sub>2</sub>)<sub>2</sub>, N-methylpyrrolidinone, (Cl<sub>2</sub>CH)<sub>2</sub>, iso-PrOH, Me<sub>2</sub>CO, PhOH, dioxane, tetrahydrofuran, and H<sub>2</sub>O. It did not dissolve in aqueous alkali or acid except at pH 3.5-10.5. The copolymer of 3,6-bis(3-mercaptopropyl)-2-piperidone and hexane-1,6-dithiol was prepared by oxidation-emulsion polymerization during 14 days at 75° with SeO<sub>2</sub> as catalyst. The yield was 48%; %N was 1.94 corresponding to a mole fraction of 0.24 for the piperidone unit; inherent viscosity = 0.69. Viscometric studies of I gave some evidence of contractile properties. Viscosities were measured in H<sub>2</sub>O, HCO<sub>2</sub>H, and MeSO<sub>3</sub>H. The behavior in MeSO<sub>3</sub>H was reminiscent of that of **polyelectrolytes**. The low mol. weight of I prevented the formation of strong fibers with which to measure contractile properties. Brittle, solution-cast films of I, imbedded in blocks of paraffin wax so that only one surface was exposed, were immersed in concentrated HCl at room temperature for 30 days. The soft, flexible specimens were removed from the wax and immersed in distilled H<sub>2</sub>O. The hydrolyzed surfaces of the polymers whitened within 1 min. and a concavity formed simultaneously due to the attractive forces between the amine and carboxyl groups produced by this process.

IT 1191-43-1, 1,6-Hexanedithiol

(reaction with 3,6-bis(3-mercaptopropyl)-2-piperidone, SeO<sub>2</sub> as catalyst in, and polyampholyte therefrom)

RN 1191-43-1 HCAPLUS

CN 1,6-Hexanedithiol (CA INDEX NAME)

HS- (CH<sub>2</sub>)<sub>6</sub>-SH

CC 45 (Synthetic High Polymers)

IT 1191-43-1, 1,6-Hexanedithiol

(reaction with 3,6-bis(3-mercaptopropyl)-2-piperidone, SeO<sub>2</sub> as catalyst in, and polyampholyte therefrom)

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L49 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:332643 HCAPLUS



DOCUMENT NUMBER: 146:350152  
 TITLE: Printing liquid solution arrays for inorganic combinatorial libraries  
 INVENTOR(S): Dong, Yi; Cheng, Shifan; Tao, Dejie; Li, Yi-Qun  
 PATENT ASSIGNEE(S): Intematix Corporation, USA  
 SOURCE: U.S. Pat. Appl. Publ., 19pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2007065947	A1	20070322	US 2005-231309	20050919
WO 2007035636	A2	20070329	WO 2006-US36285	20060918
WO 2007035636	A3	20070927		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

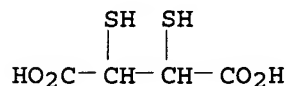
PRIORITY APPLN. INFO.: US 2005-231309 A 20050919

AB This invention provides methods and systems to prepare replicate arrays from master arrays of liquid solns. Replicate arrays of liquid solns. can be reacted to form product solid inorg. material arrays for anal. and selection of optimum processes and products with desirable properties.

IT 2418-14-6, DMSA  
 RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)  
 (DMSA; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

RN 2418-14-6 HCAPLUS

CN Butanedioic acid, 2,3-dimercapto- (CA INDEX NAME)

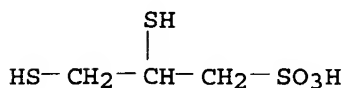


IT 4076-02-2, DMPS 25322-68-3, Polyethylene oxide  
 RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)

(method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

RN 4076-02-2 HCAPLUS

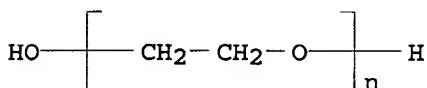
CN 1-Propanesulfonic acid, 2,3-dimercapto-, sodium salt (1:1) (CA INDEX NAME)



● Na

RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)



INCL 436080000; 436518000; 427002110

CC 79-7 (Inorganic Analytical Chemistry)

Section cross-reference(s): 78

IT **Polyelectrolytes**

(anionic; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

IT **Polyelectrolytes**

(cationic; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

IT **2418-14-6, DMSA**

RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)

(DMSA; method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

IT 60-00-4, reactions 67-42-5 67-68-5, DMSO, reactions 79-06-1,

Acrylamide, reactions 139-13-9 150-39-0,

Hydroxyethylethylenediamine triacetic acid 4076-02-2, DMPS

9002-98-6 9002-98-6D, carboxylated derivs. 9003-01-4,

Polyacrylic acid 9003-39-8, Polyvinylpyrrolidone 9003-53-6,

Polystyrene 9004-53-9, Dextrin 9004-54-0, Dextran, reactions

9005-27-0, Hydroxyethyl starch 9005-49-6, Heparin, reactions

9005-80-5, Inulin 9015-73-0, Diethylaminoethyl-dextran

9042-14-2, Dextran sulfate 24991-23-9 25014-41-9,

Polyacrylonitrile 25322-68-3, Polyethylene oxide

25513-46-6, Polyglutamic acid 26062-48-6, Poly histidine

26854-81-9, Poly histidine 37275-48-2, Bipyridyl

RL: CRG (Combinatorial reagent); RGT (Reagent); CMBI (Combinatorial study); RACT (Reactant or reagent)

(method of preparing replicate arrays of liquid solns. by printing liquid solution arrays for inorg. combinatorial libraries)

L49 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1021613 HCAPLUS

DOCUMENT NUMBER: 143:332528

TITLE: Composition for stabilizing epigallocatechin gallate (EGCG) in water phase and preparation method thereof

INVENTOR(S): Kim, Chul Hwan; Kim, Kyung Hee; Yoon, Hyun Nam

PATENT ASSIGNEE(S): Dpi Solutions, Inc., S. Korea

SOURCE: PCT Int. Appl., 13 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005087224	A1	20050922	WO 2005-KR747	20050315
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2005092625	A	20050922	KR 2004-17734	20040316
DE 112005000612	T5	20070201	DE 2005-112005000612	20050315
US 2007184105	A1	20070809	US 2006-598865	20060913
PRIORITY APPLN. INFO.:				20040316
KR 2004-17734				A
WO 2005-KR747				W
				20050315

AB Disclosed herein are a composition for stabilizing Epigallocatechin gallate (EGCG) in water phase comprising 0.1-25.0% by weight of Epigallocatechin gallate, 0.1-5.0% by weight of a cationic polymer, an anionic polymer or a mixture thereof, 0.1-10.0% by weight of antioxidant in a remainder of water or the mixture of water and a hydrophilic solvent and a preparation method thereof. The composition is not easily decomposed in water phase as well as in external environment consisting of temperature change, light effect etc. because the composition is stabilized by reacting with a cationic polymer or an anionic polymer.

IT 1200-22-2,  $\alpha$ -Lipoic acid 25322-68-3,  
Polyethyleneoxide

RL: MOA (Modifier or additive use); TEM (Technical or engineered

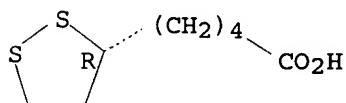
material use); USES (Uses)

(composition for stabilizing epigallocatechin gallate in water phase and preparation method thereof)

RN 1200-22-2 HCAPLUS

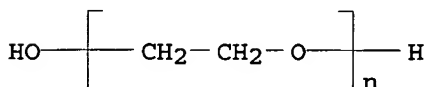
CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM A61K031-353

ICS A61P035-00; A61P039-00

CC 63-6 (Pharmaceuticals)

IT **Polyelectrolytes**

(anionic; composition for stabilizing epigallocatechin gallate in water phase and preparation method thereof)

IT **Polyelectrolytes**

(cationic; composition for stabilizing epigallocatechin gallate in water phase and preparation method thereof)

IT 50-70-4, Sorbitol, uses 50-81-7, Vitamin C, uses 50-81-7D, Vitamin C, derivs. 56-81-5, Glycerin, uses 56-87-1, Lysine, uses 56-89-3, Cystine, uses 57-55-6, Propylene glycol, uses 60-18-4, Tyrosine, uses 73-22-3, Tryptophane, uses 74-79-3, Arginine, uses 100-42-5, Styrene, uses 107-21-1, Ethylene glycol, uses 107-88-0, 1,3-Butanediol 111-46-6, Diethylene glycol, uses 1200-22-2,  $\alpha$ -Lipoic acid 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, derivs. 3403-82-5, Dibutylene glycol 7681-57-4 7757-83-7, Sodium sulfite 9002-98-6, Polyethylenimine 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Car-boxymethylcellulose 9004-34-6, Cellulose, uses 9004-61-9, Hyaluronic acid 9005-25-8, Starch, uses 9005-25-8D, Starch, oxidized 9005-32-7, Alginic acid 9005-38-3, Sodium alginate 9011-14-7, Polymethylmethacrylate 9012-76-4, Chitosan 11103-57-4, Vitamin A 11103-57-4D, Vitamin A, derivs. 25265-71-8, Dipropylene glycol 25322-68-3, Polyethyleneoxide 25322-69-4, Polypropyleneglycol

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(composition for stabilizing epigallocatechin gallate in water phase and preparation method thereof)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:982278 HCAPLUS

DOCUMENT NUMBER: 143:254101  
 TITLE: High flux hemodialysis hollow fiber membrane  
 with improved selectivity  
 INVENTOR(S): Wechs, Friedbert; Gehlen, Arne; Von Harten,  
 Bodo; Krueger, Richard; Schuster, Oliver  
 PATENT ASSIGNEE(S): Membrana G.m.b.H., Germany  
 SOURCE: Ger. Offen., 23 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102004008220	A1	20050908	DE 2004-102004008220	20040219
DE 102004008220	B4	20060112		
WO 2005082502	A1	20050909	WO 2005-EP1506	20050215
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1718400	A1	20061108	EP 2005-707397	20050215
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1921929	A	20070228	CN 2005-80005459	20050215
BR 2005007826	A	20070717	BR 2005-7826	20050215
JP 2007522851	T	20070816	JP 2006-553512	20050215
US 2008000828	A1	20080103	US 2006-588695	20060808
PRIORITY APPLN. INFO.:				DE 2004-102004008220A
				20040219
WO 2005-EP1506				W
				20050215

AB The invention concerns hydrophilic semipermeable hollow fiber membranes for blood treatment with an integral asym. structure based on a synthetic polymer. The hollow fiber membrane includes on its inner surface a porous dividing layer and an adjacent open-pore protecting layer; the ultrafiltration rate for albumin is 25-60 mL/h x m<sup>2</sup> x Hgmm. The hollow fiber is free of pore-stabilizing additives; its sieving coefficient for cytochrome c is at least 0.8 and for albumin maximum 0.005. The method also concerns a method for the preparation of the hollow fibers by (a) preparation of a spinning solution containing

12-30 weight/weight% synthetic first polymer and optionally additives; (b) extrusion of the spinning solution through an orifice to obtain hollow fibers; (c) extrusion of an inner layer containing a **polyelectrolyte** with neg. charges through the lumen of the hollow fiber orifice in a way that the inner layer contains a coagulation agent for the synthetic first polymer by being a solvent that does not dissolve the first polymer; (d) contacting the inner layer with the inner layer of the hollow fiber in order to form a separating layer in the inner part of the hollow fiber membrane; (e) exposing the hollow fiber to a coagulation bath to complete the membrane structure and to stabilize; (f) extraction of the hollow fiber to remove solvents and soluble components; (g) drying.

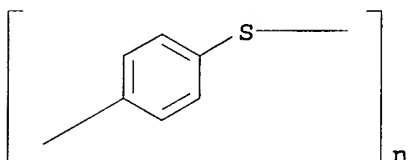
IT 25212-74-2, Poly(phenylene sulfide) 25322-68-3, Polyethylene glycol

RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(high flux hemodialysis hollow fiber membrane with improved selectivity)

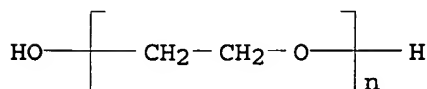
RN 25212-74-2 HCAPLUS

CN Poly(thio-1,4-phenylene) (CA INDEX NAME)



RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM B01D069-08

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

ST hemodialysis hollow fiber membrane **polyelectrolyte** selectivity

IT Flow

Hydrophilicity

Permeability

**Polyelectrolytes**

Porosity

(high flux hemodialysis hollow fiber membrane with improved selectivity)

IT 96-48-0,  $\gamma$ -Butyrolactone 105-60-2,  $\epsilon$ -Caprolactam, biological studies 127-19-5, Dimethyl acetamide 9002-89-5, Polyvinylalcohol 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose 12441-09-7D, Sorbitan, polymeric derivs. 25086-15-1, Rohagit S 25212-74-2, Poly(phenylene sulfide) 25322-68-3, Polyethylene glycol 25667-42-9, Polyether sulfone 28062-44-4, Acrylidone ACP 1005  
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (high flux hemodialysis hollow fiber membrane with improved selectivity)

L49 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:185371 HCAPLUS

DOCUMENT NUMBER: 142:257290

TITLE: System for sensitive and rapid determination of antimicrobial susceptibility

INVENTOR(S): Goldberg, David A.; Howson, David C.; Metzger, Steven W.; Buttry, Daniel A.; Saavedra, Steven Scott

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 94 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005048599	A1	20050303	US 2004-888828	20040708
AU 2004273783	A1	20050331	AU 2004-273783	20040708
CA 2532414	A1	20050331	CA 2004-2532414	20040708
WO 2005027714	A2	20050331	WO 2004-US22025	20040708
WO 2005027714	A3	20060921		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1648286	A2	20060426	EP 2004-809482	200407

08

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
PL, SK, HR

JP 2007531863 T 20071108 JP 2006-520235

200407  
08

US 2007037225 A1 20070215 US 2005-303803

200512  
16

PRIORITY APPLN. INFO.:

US 2003-486605P

P

200307  
12

US 2004-571479P

P

200405  
13

US 2004-888828

A2

200407  
08

WO 2004-US22025

W

200407  
08

US 2004-637423P

P

200412  
16

US 2004-638989P

P

200412  
22

AB The present invention relates to moving microorganisms to a surface, where they are grown in the presence and absence of antimicrobials, and by monitoring the growth of the microorganisms over time in the two conditions, their susceptibility to the antimicrobials can be determined. The microorganisms can be moved to the surface through electrophoresis, centrifugation or filtration. When the movement involves electrophoresis, the presence of oxidizing and reducing reagents lowers the voltage at which electrophoretic force can be generated and allows a broader range of means by which the target can be detected. Monitoring can comprise optical detection, and most conveniently includes the detection of individual microorganisms. The microorganisms can be stained in order to give information about their response to antimicrobials.

IT 25322-68-3, Polyethylene glycol

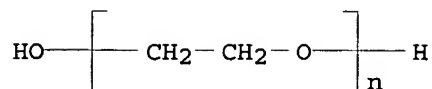
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(affinity component addnl. comprising; system for sensitive and rapid determination of antimicrobial susceptibility)

RN 25322-68-3 HCAPLUS

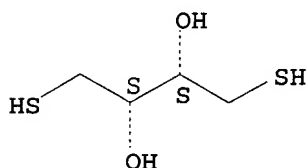
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)





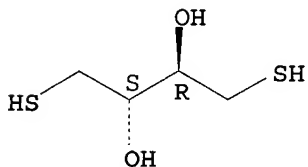
IT 3483-12-3, Dithiothreitol 6892-68-8,  
 Dithioerythritol  
 RL: ARU (Analytical role, unclassified); DEV (Device component use);  
 ANST (Analytical study); USES (Uses)  
 (as reducing agent; system for sensitive and rapid determination of  
 antimicrobial susceptibility)  
 RN 3483-12-3 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 6892-68-8 HCAPLUS  
 CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



IC ICM C12Q001-04  
 ICS C12M001-34  
 INCL 435034000; 435287100  
 CC 9-1 (Biochemical Methods)  
 Section cross-reference(s): 1, 10  
 IT Aptamers  
 Polyelectrolytes  
 (as affinity component for microorganism; system for sensitive  
 and rapid determination of antimicrobial susceptibility)  
 IT Polyelectrolytes .  
 (cationic, as affinity component for microorganism; system for  
 sensitive and rapid determination of antimicrobial susceptibility)  
 IT 9003-05-8, Polyacrylamide 25322-68-3, Polyethylene glycol  
 RL: ARU (Analytical role, unclassified); DEV (Device component use);  
 ANST (Analytical study); USES (Uses)  
 (affinity component addnl. comprising; system for sensitive and  
 rapid determination of antimicrobial susceptibility)  
 IT 50-81-7D, L-Ascorbic acid, compds. 70-18-8, Glutathione, analysis  
 102-54-5D, Ferrocene, compds. 1910-42-5, Methyl viologen  
 3483-12-3, Dithiothreitol 6892-68-8,  
 Dithioerythritol 13408-63-4D, Ferrocyanide, compds.  
 RL: ARU (Analytical role, unclassified); DEV (Device component use);

ANST (Analytical study); USES (Uses)  
(as reducing agent; system for sensitive and rapid determination of  
antimicrobial susceptibility)

L49 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:6160 HCAPLUS

DOCUMENT NUMBER: 138:88635

TITLE: Chimeric immunomodulatory compounds comprising  
nucleic acids linked through dendrimer or  
polysaccharide spacer and antigen for treating  
allergy, infection or cancer

INVENTOR(S): Fearon, Karen L.; Dina, Dino; Tuck, Stephen F.

PATENT ASSIGNEE(S): Dynavax Technologies Corporation, USA

SOURCE: PCT Int. Appl., 224 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

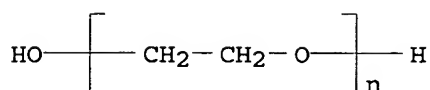
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000922	A2	20030103	WO 2002-US20025	20020621
WO 2003000922	A3	20031023		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2451974	A1	20030103	CA 2002-2451974	20020621
AU 2002345847	A1	20030108	AU 2002-345847	20020621
EP 1404873	A2	20040407	EP 2002-744589	20020621
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1533442	A	20040929	CN 2002-814608	20020621
JP 2004537535	T	20041216	JP 2003-507303	20020621
PRIORITY APPLN. INFO.:			US 2001-299883P	P 20010621
			US 2002-375253P	P 200204

W

21

01/28/2008



IC ICM C12Q

CC 15-2 (Immunochemistry)

Section cross-reference(s): 3, 63

IT Microspheres

**Polyelectrolytes**

(cationic; chimeric immunomodulatory compds. comprising nucleic acids linked through dendrimer or polysaccharide spacer and antigen for treating allergy, infection or cancer)

IT 245759-23-3DP, dendrimers 387819-74-1DP, dendrimers 482381-06-6P  
 482381-07-7P 482381-08-8P 482381-09-9P 482381-10-2P  
 482381-11-3P 482381-12-4P 482381-13-5P 482624-39-5DP,  
 dendrimers 482624-51-1DP, dendrimers 482624-53-3P 482624-56-6P  
 482624-58-8P 482624-60-2P 482624-62-4P 482624-64-6P  
 482624-66-8DP, conjugates with Ficoll 482624-66-8P 482661-31-4P  
 482661-32-5P 482661-33-6P 482661-34-7P 482661-35-8P  
 482661-36-9P 482661-37-0P 482661-38-1P 482661-39-2P  
 482661-40-5P 482661-41-6P 482661-42-7P 482661-43-8P  
 482661-44-9P 482661-45-0P 482661-46-1P 482661-47-2P  
 482661-48-3P 482661-49-4P **482661-50-7P** 482661-51-8P  
 482661-52-9P 482661-53-0P 482661-54-1P 482661-55-2P  
 482661-56-3P 482663-36-5P 482663-37-6P 482663-38-7P  
 482663-39-8P 482663-40-1P 482663-41-2P 482663-42-3P  
 482663-43-4P 482663-44-5P 482663-45-6P 482663-46-7P  
 482663-47-8P 482663-48-9P 482663-49-0P 482663-50-3P  
 482663-51-4P 482663-52-5P 482663-53-6P 482663-54-7P  
 482663-55-8P 482663-56-9P 482663-57-0P 482663-58-1P  
 482663-59-2P 482663-60-5P 482663-61-6P 482663-62-7P  
 482663-63-8P 482663-64-9P 482663-65-0P 482663-66-1P  
 482663-67-2P 482663-68-3P 482663-69-4P 482663-70-7P  
 482663-71-8P 482663-72-9P 482663-73-0P 482663-74-1P  
 482663-75-2P 482663-76-3P 482663-77-4P 482663-78-5P  
 482663-79-6P 482663-80-9P 482663-81-0P 482663-82-1P  
 482663-83-2P 482663-84-3P 482663-85-4P 482663-86-5P  
 482663-87-6P 482663-88-7P 482663-89-8P 482663-90-1P  
 482663-91-2P 482663-92-3P 482663-93-4P 482663-94-5P  
 482663-95-6P 482663-96-7P 482663-97-8P 483382-43-0P  
 483382-44-1P 483382-45-2P 483382-46-3P 483382-47-4P  
 483382-48-5P 483382-49-6P 483382-50-9P 483382-51-0P  
 483382-52-1P 483382-53-2P 483382-54-3P 483382-55-4P  
 483382-56-5P 483382-57-6P 483382-58-7P 483382-59-8P  
 483382-60-1P 483382-61-2P 483382-64-5P 483382-65-6P  
 483382-66-7P 483382-67-8P 483382-68-9P 483969-90-0DP,  
 dendrimers 483971-28-4DP, dendrimers 483973-10-0DP, dendrimers  
 RL: PAC (Pharmacological activity); PRP (Properties); PUR  
 (Purification or recovery); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (chimeric immunomodulatory compds. comprising nucleic acids  
 linked through dendrimer or polysaccharide spacer and antigen for  
 treating allergy, infection or cancer)

IT 56-81-5, Glycerol, biological studies 115-77-5, Pentaerythritol,  
 biological studies 616-29-5, 1,3-Diamino-2-propanol  
 25322-68-3, Polyethylene glycol 101221-89-0,  
 1,2-Dideoxy-D-ribose

RL: BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent) (spacer; chimeric immunomodulatory compds. comprising nucleic acids linked through dendrimer or polysaccharide spacer and antigen for treating allergy, infection or cancer)

L49 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:39555 HCAPLUS

DOCUMENT NUMBER: 136:107223

TITLE: Cleansing articles for skin and/or hair

INVENTOR(S): Albacarys, Lourdes Dessus; Mcatee, David Michael; Deckner, George Endel

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: U.S., 32 pp., Cont.-in-part of U.S. Ser. No. 65,991, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

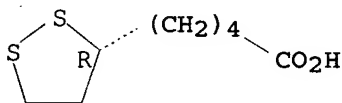
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6338855	B1	20020115	US 1999-296334	19990422
PRIORITY APPLN. INFO.:			US 1996-738145	B2 19961025
			US 1996-738668	B1 19961025
			US 1997-974033	B2 19971119
			US 1998-65991	B2 19980424
			US 1998-83015P	P 19980424

AB The present invention relates to a substantially dry, disposable, personal cleansing article useful for both cleansing the skin or hair and delivering skin care actives onto the skin or hair. These articles are used by the consumer by wetting the dry article with water and generating lather by subjecting the wetted article to mech. forces, e.g., rubbing. The article comprises a water insol. substrate, a lathering surfactant, and a skin care active component. Preferably, the articles of the present invention further comprise a deposition aid and/or a conditioning component. The following ingredients containing PEG 0.5 and water qs to 100%. To the above mixture was added disodium EDTA 0.10, sodium lauroyl sarcosinate 3.33, cocamidopropyl betaine 3.33, decyl polyglucoside 3.33, methylparaben 0.25, phenoxyethanol 0.3, and benzyl alc. 0.3%. The following

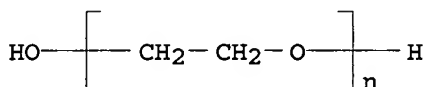
components water 2.0, butylene glycol 2.0, and propylparaben 0.15% were added to the above surfactant mixture. A skin-care active composition containing sucrose esters with cotton fatty acids 48.00, sucrose ester with behenic acid 12.00, petrolatum 10.00, tribehenin 5.00, and C10-30 cholesterol/lanosterol esters 18.00% and was added to the surfactant mixture.

IT 1200-22-2, Lipoic acid 25322-68-3D, Polyethylene glycol, derivs.  
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (cleansing articles for skin and/or hair)  
 RN 1200-22-2 HCAPLUS  
 CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 25322-68-3 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)



IC ICM A01N025-34  
 ICS A01N025-08  
 INCL 424409000  
 CC 62-4 (Essential Oils and Cosmetics)  
 IT **Polyelectrolytes**  
 Surfactants  
 (cationic; cleansing articles for skin and/or hair)  
 IT 50-21-5, Lactic acid, biological studies 50-23-7, Hydrocortisone 56-81-5D, Glycerin, derivs. 56-86-0, L-Glutamic acid, biological studies 57-13-6, Urea, biological studies 57-50-1D, Sucrose, esters 57-55-6, Propylene glycol, biological studies 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, C10-30 esters 58-95-7, Tocopheryl acetate 59-67-6, Nicotinic acid, biological studies 68-26-8, Retinol 69-72-7, Salicylic acid, biological studies 79-14-1, Glycolic acid, biological studies 79-63-0D, Lanosterol, C10-30 esters 79-81-2, Retinyl palmitate 81-13-0, Panthenol 83-86-3, Phytic acid 94-36-0, Benzoyl peroxide, biological studies 96-26-4, Dihydroxyacetone 97-59-6, Allantoin 98-92-0, Niacinamide 100-51-6, Benzyl alcohol, biological studies 101-20-2, 3,4,4'-Trichlorocarbanilide 107-35-7D, Taurine, derivs. 107-36-8 107-41-5, Hexylene glycol 107-97-1, Sarcosinic acid 108-46-3, Resorcinol, biological studies 122-99-6, Phenoxyethanol 123-99-9, Azelaic acid, biological studies 131-57-7, Oxybenzone 137-16-6, Sodium Lauroyl Sarcosinate 302-79-4, trans-Retinoic acid 497-76-7, Arbutin 501-30-4, Kojic acid 616-91-1, N-Acetyl L-cysteine 770-35-4, Phenoxyisopropanol 1200-22-2, Lipoic acid 1464-44-4 2382-43-6 3380-34-5 5466-77-3, 2-Ethylhexyl p-methoxycinnamate 6180-61-6, 3-Phenoxypropanol 9000-30-0, Guar Gum 9002-88-4D,

Polyethylene, derivs. 9002-89-5D, Polyvinyl alcohol, derivs.  
 9003-07-0D, Polypropylene, derivs. 9003-20-7, Polyvinyl acetate  
 9004-34-6D, Cellulose, derivs. 9004-62-0, Hydroxyethyl cellulose  
 15687-27-1, Ibuprofen 18641-57-1, Tribehenin 22204-53-1,  
 Naproxen 25231-21-4, Polypropylene glycol stearyl ether  
 25322-68-3D, Polyethylene glycol, derivs. 25322-69-4D,  
 Polypropylene glycol, derivs. 26855-43-6, Triglyceryl Monostearate  
 27503-81-7, 2-Phenylbenzimidazole-5-sulfonic acid 29656-68-6,  
 Ethyl hexanediol 56449-50-4, Sucrose Behenate 81859-24-7,  
 Polyquaternium-10 97950-17-9, cis-Retinoic acid 99550-56-8,  
 Polyglyceryl Tristearate 100895-09-8, Decaglyceryl Dipalmitate  
 115515-88-3, Decaglyceryl Stearate 142769-93-5 156028-14-7,  
 Sodium Lauroamphoacetate

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (cleansing articles for skin and/or hair)

REFERENCE COUNT: 95 THERE ARE 95 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L49 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:708579 HCAPLUS

DOCUMENT NUMBER: 131:327309

TITLE: Lathering surfactants in cleansing compositions  
 for skin and/or hair which also deposits skin  
 care actives

INVENTOR(S): Albacarys, Lourdes Dessus; McAtee, David  
 Michael; Deckner, George Endel

PATENT ASSIGNEE(S): Procter + Gamble Co., USA

SOURCE: PCT Int. Appl., 94 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955303	A1	19991104	WO 1999-IB635	199904 12
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2332948	A1	19991104	CA 1999-2332948	199904 12
AU 9929524	A	19991116	AU 1999-29524	199904 12
AU 756691	B2	20030123		
BR 9909629	A	20001219	BR 1999-9629	199904 12
EP 1071396	A1	20010131	EP 1999-910615	

199904

12

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT,  
IE, FI

JP 2002512944

T

20020508

JP 2000-545503

199904

12

MX 2000PA10386

A

20010731

MX 2000-PA10386

200010

23

PRIORITY APPLN. INFO.:

US 1998-83015P

P

199804

24

WO 1999-IB635

W

199904

12

AB The present invention relates to a substantially dry, disposable, personal cleansing article useful for both cleansing the skin or hair and delivering skin care actives onto the skin or hair. These articles are used by the consumer by (i) wetting the dry article with water and (ii) generating lather by subjecting the wetted article to mech. forces, e.g., rubbing. The article comprises a water insol. substrate, a lathering surfactant, and a skin care active component. Preferably, the articles of the present invention further comprise a deposition aid and/or a conditioning component. E.g., a surfactant phase was prepared by dissolving hydroxyethyl cellulose 0.25% and guar gum 0.25% in water (to 100% by weight) and then adding the following ingredients: Na lauroyl sarcosinate 3.33, cocamidopropyl betaine 3.33, decyl polyglucoside 3.33, Me paraben 0.25, phenoxyethanol 0.3, and benzyl alc. 0.3%, resp.. At the end, a 1.5-2.5 g of the mixture containing water 2.0 g, butylene glycol 2.0 g, and Pr paraben 0.15 g was added to the first mixture and dried. A skin care active phase was prepared containing SEFA cottonate 43.0, petrolatum 10.00, tribehenin 5.0, polyethylene wax 9.0, synthetic beeswax 3.0, C10-30 cholesterol/lanosterol esters 23.0, vitamin A acetate 2.0, and TiO<sub>2</sub> 5.0 parts. A 0.05-0.75 g of this phase was mixed with the surfactant phase to obtain a skin or hair cleansing composition

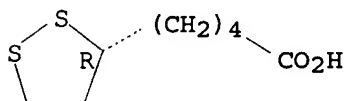
IT 1200-22-2, Lipoic acid 25322-68-3

RL: BUU (Biological use, unclassified); BIOL (Biological study);  
USES (Uses)(cleansing compns. containing surfactants and polymers for skin  
and/or hair which also deposits skin care actives)

RN 1200-22-2 HCAPLUS

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (CA INDEX NAME)

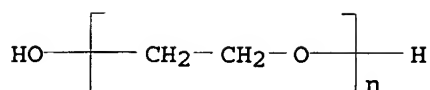
Absolute stereochemistry. Rotation (+).



RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX  
NAME)





IC A61K007-50

CC 62-1 (Essential Oils and Cosmetics)

IT **Polyelectrolytes**

(cationic; cleansing compns. containing surfactants and polymers for skin and/or hair which also deposits skin care actives)

IT 50-21-5, biological studies 50-23-7, Hydrocortisone 56-81-5, 1,2,3-Propanetriol, biological studies 56-86-0D, L-Glutamic acid, esters, biological studies 57-13-6, Urea, biological studies 57-50-1D, Sucrose, esters 57-55-6, 1,2-Propanediol, biological studies 57-88-5, Cholesterol, biological studies 58-95-7, Tocopheryl acetate 59-67-6, Nicotinic acid, biological studies 64-19-7D, Acetic acid, esters, biological studies 68-26-8, Retinol 69-72-7, biological studies 79-10-7D, Acrylic acid, esters 79-14-1, biological studies 79-81-2, Retinyl palmitate 81-13-0, Panthenol 83-86-3, Phytic acid 94-13-3, Propyl paraben 96-26-4, Dihydroxyacetone 97-59-6, Allantoin 98-92-0, Niacinamide 99-76-3, Methyl paraben 100-51-6, Benzyl alcohol, biological studies 101-20-2, 3,4,4'-Trichlorocarbaniide 107-35-7D, Taurine, salts 107-36-8D, Isethionic acid, organic esters 107-41-5, Hexylene glycol 107-97-1D, Sarcosine, esters 108-46-3, Resorcinol, biological studies 112-85-6D, Behenic acid, esters 122-99-6, Phenoxyethanol 123-99-9, Nonanedioic acid, biological studies 127-47-9, Vitamin A acetate 131-57-7, Oxybenzone 137-16-6, Sodium lauroyl sarcosinate 302-79-4, trans-Retinoic acid 497-76-7, Arbutin 501-30-4, Kojic acid 555-43-1, Glyceryl tristearate 616-91-1, N-Acetyl-L-cysteine 617-57-2D, 2-Lactylic acid, esters 770-35-4, Phenoxyisopropanol 1200-22-2, Lipoic acid 2382-43-6 3380-34-5 4472-12-2D, Iminoacetic acid, alkyl esters 5300-03-8, 9-cis-Retinoic acid 5466-77-3, 2-Ethylhexyl p-methoxycinnamate 7664-38-2D, Phosphoric acid, organic esters, biological studies 7664-93-9D, Sulfuric acid, organic esters, biological studies 9000-30-0, Guar gum 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6D, Cellulose, esters and ethers, biological studies 9004-62-0, Hydroxyethyl cellulose 13463-67-7, Titanium dioxide, biological studies 13822-09-8, Benzyl peroxide 15687-27-1, Ibuprofen 18641-57-1, Tribehenin 19223-69-9D, N-cocoacyl derivs. 22204-53-1, Naproxen 25231-21-4 25265-75-2, Butylene glycol 25322-68-3 25322-69-4 26855-43-6, Triglyceryl monostearate 27503-81-7, 2-Phenylbenzimidazole-5-sulfonic acid 29656-68-6, Ethyl hexanediol 41593-38-8, Phenoxypropanol 53240-01-0 81859-24-7, Polyquaternium 10 100895-09-8, Decaglyceryl dipalmitate 115515-88-3, Decaglyceryl stearate 156028-14-7, Sodium lauroamphoacetate

RL: BUU (Biological use, unclassified); BIOL (Biological study);

USES (Uses)

(cleansing compns. containing surfactants and polymers for skin and/or hair which also deposits skin care actives)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:375525 HCAPLUS

DOCUMENT NUMBER: 131:59262  
 TITLE: Perfluorocarbyl sulfoxide or sulfone salts and their use as ionic conductors  
 INVENTOR(S): Michot, Christophe; Armand, Michel; Choquette, Yves; Gauthier, Michel  
 PATENT ASSIGNEE(S): Acep Inc., Can.; Universite de Montreal; Centre National de la Recherche Scientifique  
 SOURCE: PCT Int. Appl., 66 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9928292	A1	19990610	WO 1998-FR2585	19981201
W: CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2224046	A1	19990601	CA 1997-2224046	19971201
CA 2228801	A1	19990803	CA 1998-2228801	19980203
CA 2279399	A1	19990610	CA 1998-2279399	19981201
EP 968181	A1	20000105	EP 1998-958294	19981201
EP 968181	B1	20050427		
R: DE, FR, GB, IT				
JP 2002500678	T	20020108	JP 1999-530206	19981201
EP 1626041	A2	20060215	EP 2005-23466	19990203
R: DE, FR, GB, IT				
US 6620546	B1	20030916	US 1999-355454	19990924
US 2002009635	A1	20020124	US 2001-859784	20010516
PRIORITY APPLN. INFO.:			CA 1997-2224046	A 19971201
			CA 1998-2228801	A 19980203
			WO 1998-FR2585	W 199812

01

CA 1998-2256945	A	199812 18
EP 1999-903554	A3	199902 03
US 1999-355454	A1	199909 24

OTHER SOURCE(S): MARPAT 131:59262

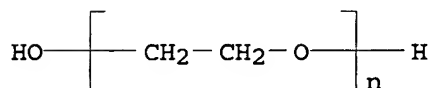
AB An ionic composition comprises a salt dissolved in a solvent and has a conductivity  $>10^{-5}$  S/cm between  $-30$  and  $+150^{\circ}$ . The cation is a proton, hydronium, hydroxonium, nitrosonium ( $\text{NO}^{+}$ ),  $\text{NH}_4^{+}$ , or an organic or organometallic metal cation. The anion is a carbanion bearing a perfluorinated substituent or a substituent at least bearing a F on the  $\alpha$  carbon of the carbanion, and two nonperfluorinated electron-withdrawing substituents. The composition can be used as an electrolyte in electrochem. devices, as a catalyst for chemical reactions, and as a photochem. or thermochem. initiator for polymerization or crosslinking reactions. Thus,  $\text{CH}_2(\text{SO}_2\text{Cl})_2$  was amidated with  $\text{Me}_2\text{NH}$ , treated with  $\text{NaH}$ , condensed with (trifluoromethylsulfonyl)imidazole, and neutralized with  $\text{K}_2\text{CO}_3$  to give  $(\text{Me}_2\text{NSO}_2)_2\text{C}-(\text{SO}_2\text{CF}_3) \text{K}^{+}$ , which was exchanged with  $\text{LiCl}$  to give  $(\text{Me}_2\text{NSO}_2)_2\text{C}-(\text{SO}_2\text{CF}_3) \text{Li}^{+}$  (I), soluble in polar organic solvents and in poly(ethylene oxide) (II). A solution of I in II at  $\text{O/Li} = 12$  shows ionic conductivity  $>10^{-4}$  S/cm at  $60^{\circ}$ ; an acetone solution of I is a catalyst for the Diels-Alder reaction; and a combination of I with an ethylene oxide-allyl glycidyl ether-Me glycidyl ether copolymer at  $\text{O/Li} = 20$  serves as an electrolyte in a Li battery. The analog  $\text{Me}_2\text{NSO}_2\text{C}-(\text{SO}_2\text{CF}_3)\text{SO}_2\text{C}_6\text{H}_4\text{CH}:\text{CH}_2\text{-p Li}^{+}$  was prepared and copolymerized 6:4 with acrylonitrile, and the resulting polymer 30, ethylene carbonate 35, and propylene carbonate 35% were combined to give a **polyelectrolyte** gel with ionic conductivity  $>10^{-4}$  S/cm at  $30^{\circ}$ .

IT 25322-68-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(matrix; perfluorocarbyl sulfone salts as ionic conductors in)

RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)

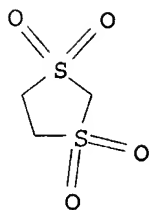


IT 26413-19-4, 1,3-Dithiolane 1,1,3,3-tetraoxide

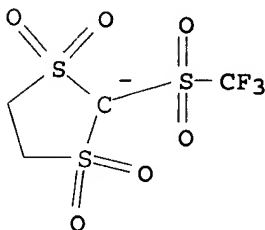
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

RN 26413-19-4 HCAPLUS

CN 1,3-Dithiolane, 1,1,3,3-tetraoxide (CA INDEX NAME)

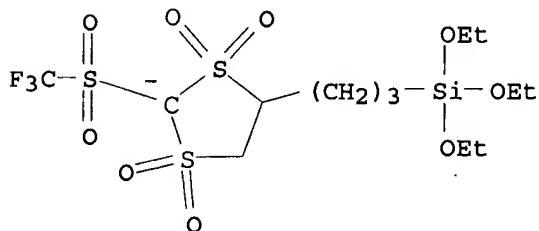


IT 227938-57-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (preparation of perfluorocarbyl sulfone salts as ionic conductors)  
 RN 227938-57-0 HCAPLUS  
 CN 1,3-Dithiolane, 2-[(trifluoromethyl)sulfonyl]-, 1,1,3,3-tetraoxide,  
 ion(1-), potassium (9CI) (CA INDEX NAME)



● K<sup>+</sup>

IT 227938-59-2P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (preparation of perfluorocarbyl sulfone salts as ionic conductors)  
 RN 227938-59-2 HCAPLUS  
 CN Silane, triethoxy[3-[1,1,3,3-tetraoxido-2-  
 [(trifluoromethyl)sulfonyl]-1,3-dithiolan-4-yl]propyl]-, ion(1-),  
 lithium (9CI) (CA INDEX NAME)



● Li<sup>+</sup>

IC ICM C07C317-04  
ICS C07D339-06; C07D311-82; C07C317-12; C08G061-02; C08F232-04;  
H01M010-40; H01M006-16

CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 23, 24, 25, 28, 52, 67

IT 25322-68-3 136474-71-0, Allyl glycidyl ether-ethylene  
oxide-glycidyl methyl ether copolymer 227938-61-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(matrix; perfluorocarbyl sulfone salts as ionic conductors in)

IT 111-92-2, Dibutylamine 124-40-3, reactions 335-05-7,  
Trifluoromethanesulfonyl fluoride 589-15-1, p-Bromobenzyl bromide  
2633-67-2, p-Styrenesulfonyl chloride 5089-70-3,  
(3-Chloropropyl)triethoxysilane 5799-68-8, Methanedisulfonyl  
dichloride 26413-19-4, 1,3-Dithiolane 1,1,3,3-tetraoxide  
29540-81-6 31876-38-7D, Moniliformin, alkali metal salts  
41804-89-1, Potassium triflinate 51270-39-4, 1-Bromo-N,N-  
dimethylmethanesulfonamide 65039-09-0, 1-Ethyl-3-methyl-1H-  
imidazolium chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 173852-59-0P 227938-52-5P 227938-53-6P 227938-57-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 227938-49-0DP, potassium ion-exchanged 227938-51-4DP, potassium  
ion-exchanged 227938-55-8P 227938-59-2P 227938-63-8P  
227938-69-4P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L49 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:224098 HCAPLUS  
DOCUMENT NUMBER: 126:209293  
TITLE: A colorimetric method of detecting thiol or  
mercaptan compounds and its use for oral malodor  
determination  
INVENTOR(S): Kerschensteiner, Daniel A.  
PATENT ASSIGNEE(S): The Oralife Group, Inc., Can.; Kerschensteiner,  
Daniel, A.  
SOURCE: PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9705482	A1	19970213	WO 1996-US12488	199607 30

W: CA, GB, US

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE

PRIORITY APPLN. INFO.:

US 1995-1711P

P

199507

31

AB The invention relates to a method for detecting the presence of thiol, mercaptans, sulfhydryl or volatile sulfur compds. in a sample and to reagents and reaction mixts. which can be used in detecting such compds. More particularly, it relates to colloidal metal sol suspensions which have a flocculated state visually distinguishable from a monodisperse suspended state and can be used in detecting thiol compds. The tensioned or sensitized state of colloidal metal sol suspensions are prepared and subsequently exposed to a sample which may contain thiol compds. The presence of such compds. can be determined by the color change of the soluble. The reagents and reaction mixts. are used in the diagnosis of halitosis, as halitosis is related to the presence of thiol and volatile sulfur compds. in the breath sample of an individual. The invention also relates to halitosis diagnostic kits comprising a reagent or reaction mixture of the invention and a blow tube.

IT 3483-12-3, Dithiothreitol 6725-64-0, Methane dithiol

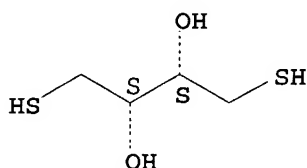
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(colorimetric detection of thiol or mercaptan compds. in breath in halitosis diagnosis)

RN 3483-12-3 HCAPLUS

CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 6725-64-0 HCAPLUS

CN Methanedithiol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

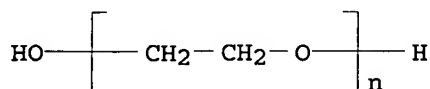
HS-CH<sub>2</sub>-SH

IT 25322-68-3, Polyethylene glycol

RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(colorimetric detection of thiol or mercaptan compds. in breath in halitosis diagnosis)

RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy- (CA INDEX NAME)



IC ICM G01N033-00

CC 9-5 (Biochemical Methods)

- Section cross-reference(s): 14, 80
- IT Detergents  
**Polyelectrolytes**  
 Respiratory air  
 (colorimetric detection of thiol or mercaptan compds. in breath in halitosis diagnosis)
- IT 52-90-4, Cysteine, analysis 60-23-1, 2-Mercaptoethylamine  
 60-24-2, 2-Mercaptoethanol 68-11-1, Mercaptoacetic acid, analysis  
 70-18-8, GSH, analysis 74-93-1, Methyl mercaptan, analysis  
 79-42-5, Thiolaetic acid 96-27-5, 3-Mercapto-1,2-propanediol  
 107-96-0, 3-Mercaptopropionic acid 147-93-3, Thiosalicylic acid  
 872-35-5, 2-Mercaptoimidazole 3375-50-6, 2-Mercaptoethanesulfonic acid 3483-12-3, Dithiothreitol 6325-91-3,  
 2-Mercapto-5-nitrobenzimidazole 6725-64-0, Methane dithiol  
 7704-34-9D, Sulfur, compds., analysis 7783-06-4, Hydrogen sulfide, analysis  
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (colorimetric detection of thiol or mercaptan compds. in breath in halitosis diagnosis)
- IT 77-92-9, Citric acid, analysis 77-92-9D, Citric acid, salts  
 7647-01-0, Hydrochloric acid, analysis 7647-14-5, Sodium chloride, analysis 9000-01-5, Gum arabic 9002-89-5, Polyvinyl alcohol  
 9004-54-0, Dextran, analysis 9005-32-7, Alginic acid 9005-64-5, Tween 20 10043-52-4, Calcium chloride, analysis 25322-68-3  
 , Polyethylene glycol  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (colorimetric detection of thiol or mercaptan compds. in breath in halitosis diagnosis)

L49 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:534683 HCAPLUS

DOCUMENT NUMBER: 105:134683

ORIGINAL REFERENCE NO.: 105:21747a,21750a

TITLE: Ion transport numbers for new polymer electrolytes

AUTHOR(S): Shriver, D. F.; Clancy, S.; Blonsky, P. M.; Hardy, L. C.

CORPORATE SOURCE: Dep. Chem., Northwestern Univ., Evanston, IL, 60201, USA

SOURCE: Transp.-Struct. Relat. Fast Ion Mixed Conduct., Proc. Risoe Int. Symp. Metall. Mater. Sci., 6th (1985), 353-7. Editor(s): Poulsen, Finn Willy. Risoe Natl. Lab.: Roskilde, Den.  
 CODEN: 55EFAX

DOCUMENT TYPE: Conference

LANGUAGE: English

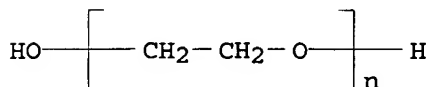
- AB A potentiostatic polarization cell technique was employed to determine ion transport nos. (t) for a wide variety of polymer-salt complexes including some new polymer electrolytes based on polyphosphazenes. A wide variation in t was observed and in one instance the heat of individual ion transport was determined. The similarity of the heat of transport for the anion and cation indicated that for poly(ethylene succinate)-lithium boron tetrafluoride complex, either polymer segmental motion or ion correlation was the dominant contributor to both cation and anion motion. The good room-temperature polyphosphazene based electrolyte had  $t = 0.3$  at  $60^\circ$ .
- IT 25322-68-3D, complexes with alkali metal salts  
 37325-04-5D, complexes with silver nitrate and silver trifluoromethane sulfonate

RL: PRP (Properties)

(ion transport number of, determination of, by potentiostatic polarization)

RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (CA INDEX NAME)



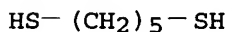
RN 37325-04-5 HCAPLUS

CN 1,5-Pentanedithiol, disodium salt, polymer with 1,5-dibromopentane (9CI) (CA INDEX NAME)

CM 1

CRN 50973-58-5

CMF C5 H12 S2 . 2 Na

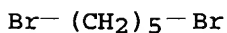


● 2 Na

CM 2

CRN 111-24-0

CMF C5 H10 Br2



CC 36-5 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 72

IT **Polyelectrolytes**

(ion transport number of, determination of, by potentiostatic polarization)

IT 540-72-7D, poly(ethylen oxide) and phosphazene polymer complexes

556-65-0D, poly(ethylene oxide) complexes 2923-28-6D,

poly(pentamethylene sulfide) and phosphazene polymer complexes

2926-30-9D, poly(ethylene succinate) and phosphazene polymer

complexes 7761-88-8D, poly(pentamethylene sulfide) complexes.

13755-29-8D, poly(ethylene succinate) complexes 14283-07-9D,

poly(ethylene oxide) complexes 25322-68-3D, complexes with

alkali metal salts 25569-53-3 25667-11-2D, complexes with alkali

metals 33454-82-9D, poly(ethylen oxide) and phosphazene polymer

complexes 37325-04-5D, complexes with silver nitrate and

silver trifluoromethane sulfonate 50851-57-5D, poly(ethylene

oxide) complexes

RL: PRP (Properties)

(ion transport number of, determination of, by potentiostatic polarization)

=>



=> fil hcap  
FILE 'HCAPLUS' ENTERED AT 12:22:28 ON 28 JAN 2008  
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FILE LAST UPDATED: 27 Jan 2008 (20080127/ED)

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=> d his l52-

FILE 'HCAPLUS' ENTERED AT 12:18:47 ON 28 JAN 2008  
L52 172411 S L14  
L53 14 S L47 AND L52  
L54 4 S L53 NOT L49  
L55 0 S L54 AND L50

FILE 'HCAPLUS' ENTERED AT 12:22:28 ON 28 JAN 2008

=> d l54 ibib abs hitstr hitind 1-4

L54 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:1036407 HCAPLUS  
DOCUMENT NUMBER: 142:27902  
TITLE: Hair care and nail care compositions based on  
ion-pair delivery system for gender and ethnic  
selective applications  
INVENTOR(S): Gupta, Shyam K.  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 8 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241114	A1	20041202	US 2003-250045	20030530
PRIORITY APPLN. INFO.:				200305
				US 2003-250045

30

AB This invention relates to a novel ion-pair delivery system useful for gender and ethnic background selective hair care and nail care applications in which an electron donor composition and an electron acceptor composition, or a proton donor composition and a proton acceptor composition, or an anionic and a cationic composition, are combined synergistically. The bioavailability, deposition, functional performance, and consumer aesthetics of the compns. thus combined in such ion-pairs are enhanced synergistically. Hair care compns., such as shampoo, conditioner, hair lotion, hair oil, hair gel, hair sheen, hair rinse, hair balm, hair wax, hair spray, and such, and nail care compns., such as nail enamel, nail creams, nail serums, nail lacquers, nail spray, and nail polish, and such, can thus be obtained with synergistically enhanced performance. An example compound was cinnamidopropyltrimonium N-acetylcysteinate, prepared from cinnamidopropyltrimonium chloride and N-acetylcysteine.

IT 1200-22-2, Lipoic acid 81859-24-7, Polyquaternium 10

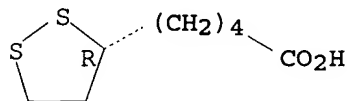
RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(hair care and nail care compns. based on ion-pair delivery system for gender and ethnic selective applications)

RN 1200-22-2 HCAPLUS

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 81859-24-7 HCAPLUS

CN Cellulose, 2-hydroxyethyl 2-[2-hydroxy-3-(trimethylammonio)propoxy]ethyl 2-hydroxy-3-(trimethylammonio)propyl ether, chloride (CA INDEX NAME)

CM 1

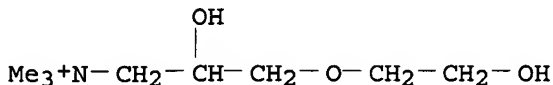
CRN 170553-71-6

CMF C8 H20 N O3 . x C6 H16 N O2 . x C2 H6 O2 . x Unspecified

CM 2

CRN 170344-46-4

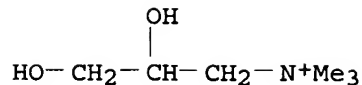
CMF C8 H20 N O3



CM 3

CRN 44814-66-6

CMF C6 H16 N O2



CM 4

CRN 9004-34-6

CMF Unspecified

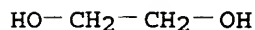
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 107-21-1

CMF C2 H6 O2



IT 800382-67-6P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(hair care and nail care compns. based on ion-pair delivery  
system for gender and ethnic selective applications)

RN 800382-67-6 HCAPLUS

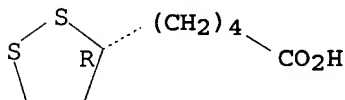
CN 3-Pyridinecarboxylic acid, (3R)-1,2-dithiolane-3-pentanoate (1:1)  
(9CI) (CA INDEX NAME)

CM 1

CRN 1200-22-2

CMF C8 H14 O2 S2

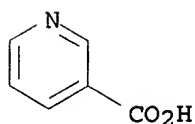
Absolute stereochemistry. Rotation (+).



CM 2

CRN 59-67-6

CMF C6 H5 N O2



IC ICM A61K007-04  
ICS A61K007-06; A61K007-11  
INCL 424061000; 424070140; 424074000  
CC 62-3 (Essential Oils and Cosmetics)  
IT Hair preparations  
Ion pairs  
Polyelectrolytes  
Shampoos  
(hair care and nail care compns. based on ion-pair delivery system for gender and ethnic selective applications)  
IT 52-90-4, Cysteine, biological studies 52-90-4D, L-Cysteine, esters 56-87-1D, L-Lysine, esters 56-89-3, Cystine, biological studies 56-89-3D, Cystine, esters 57-00-1, Creatine 58-61-7, Adenosine, biological studies 58-85-5, Biotin 60-27-5, Creatinine 65-23-6, Pyridoxine 66-72-8, Pyridoxal 67-68-5, Dms0, biological studies 67-71-0, MSM 70-18-8, Glutathione, biological studies 71-30-7, Cytosine 74-79-3D, L-Arginine, esters 85-87-0, Pyridoxamine 93-60-7 94-44-0 97-59-6, Allantoin 98-92-0, Niacinamide 107-35-7, Taurine 112-02-7, Cetrimonium chloride 112-03-8, Quaternium 10 118-00-3, Guanosine, biological studies 122-19-0, Stearalkonium chloride 146-48-5, Yohimbine 305-84-0, Carnosine 616-91-1, N-Acetylcysteine 1200-22-2, Lipoic acid 1617-90-9, Vincamine 1812-53-9, Dicetyldimonium chloride 3416-24-8, Glucosamine 3612-78-0 9007-27-6, Chondroitin 9012-76-4, Chitosan 14492-68-3, Quaternium 7 19213-70-8, N-Acetyltaurine 25779-79-7, N-Acetylcystine 26062-79-3, Polyquaternium 6 26590-05-6, Polyquaternium 7 27025-41-8, Oxidized glutathione 42971-09-5, Vinpocetine 53633-54-8, Polyquaternium 11 63451-27-4, Polyquaternium 2 75345-27-6, Polyquaternium 1 81859-24-7, Polyquaternium 10 92183-41-0, Polyquaternium 4 95144-24-4, Polyquaternium 16 150599-70-5, Polyquaternium 44 173833-36-8, Quaternium 82 174761-16-1, Polyquaternium 46 177190-98-6, Cinnamidopropyltrimonium chloride 463965-85-7, Behentrimonium methosulfate 719282-79-8, Polyquaternium 59 801297-48-3, Quaternium 79  
RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
(hair care and nail care compns. based on ion-pair delivery system for gender and ethnic selective applications)  
IT 19542-74-6P, Sodium N-acetylcysteinate 34404-14-3P 800382-66-5P 800382-67-6P 800382-68-7P 800382-69-8P  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(hair care and nail care compns. based on ion-pair delivery system for gender and ethnic selective applications)

L54 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2002:41634 HCAPLUS  
DOCUMENT NUMBER: 136:107515  
TITLE: Polymer formation in presence of nucleic acid using template polymerization  
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.  
PATENT ASSIGNEE(S): Mirus Corp., USA  
SOURCE: U.S., 26 pp., Cont.-in-part of U.S. Ser. No. 778,657.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 12  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 6339067	B1	20020115	US 1997-692	199712 30
US 6126964	A	20001003	US 1997-778657	199701 03
US 2001024829	A1	20010927	US 2001-753990	200101 02
US 6383811	B2	20020507		
US 2002165184	A1	20021107	US 2001-993216	200111 16
US 6706922	B2	20040316		
US 2004161463	A1	20040819	US 2004-755785	200401 12
US 7022525	B2	20060404		
US 2006024828	A1	20060202	US 2005-235000	200509 26
PRIORITY APPLN. INFO.:			US 1997-778657	A2 199701 03
			US 1996-9593P	P 199601 04
			US 1997-692	A2 199712 30
			US 1999-174132P	P 199912 31
			US 2001-993216	A3 200111 16
			US 2004-755785	A3 200401 12

AB Polymers are formed in the presence of nucleic acid using template polymerization. Also, polymerization occurs in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. For example, step polymerization with DNA

as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

IT 389132-33-6P

RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polymer formation in presence of nucleic acid using template polymerization)

RN 389132-33-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with dimethyl 3,3'-dithiobis[propanimidate] and  $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[[(2-aminoethyl)nitrilio]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2), sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 389132-32-5

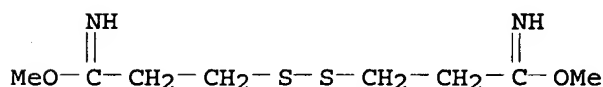
CMF (C8 H16 N2 O2 S2 . C4 H6 O2 . (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2)x

CCI PMS

CM 2

CRN 59012-54-3

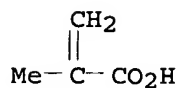
CMF C8 H16 N2 O2 S2



CM 3

CRN 79-41-4

CMF C4 H6 O2



CM 4

CRN 210292-30-1

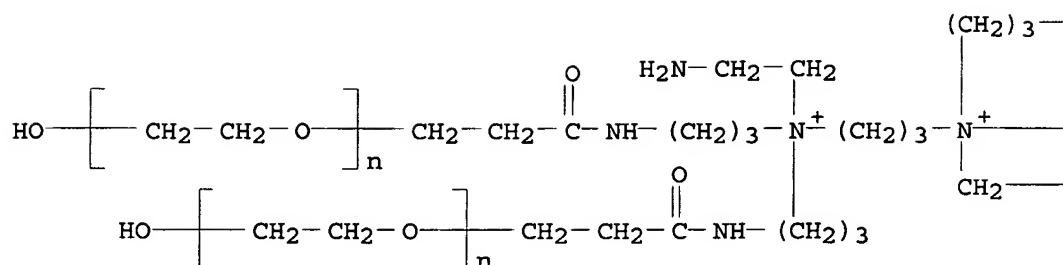
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2 C2 F3 O2

CM 5

CRN 210292-29-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66

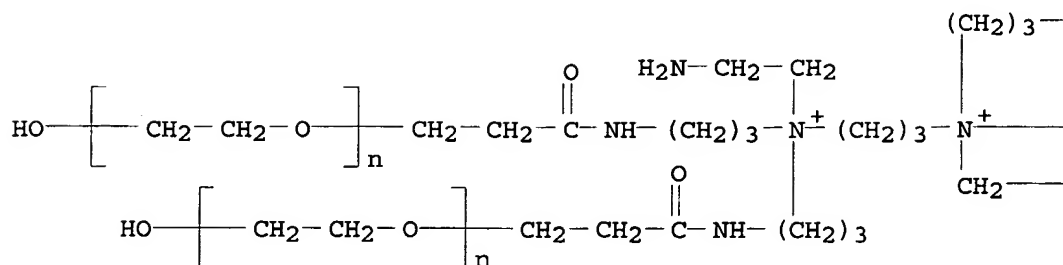
PAGE 1-A


$$\begin{array}{c} \text{O} \\ \parallel \\ \text{---NH---C---CH}_2\text{---CH}_2\text{---}\left[\text{O---CH}_2\text{---CH}_2\text{---}\right]_n\text{OH} \\ \\ \text{O} \\ \parallel \\ \text{---(CH}_2\text{)}_3\text{---NH---C---CH}_2\text{---CH}_2\text{---}\left[\text{O---CH}_2\text{---CH}_2\text{---}\right]_n\text{OH} \\ \\ \text{---CH}_2\text{---NH}_2 \end{array}$$
$$\begin{array}{c} \text{F} \\ | \\ \text{F}-\text{C}-\text{CO}_2^- \\ | \\ \text{F} \end{array}$$

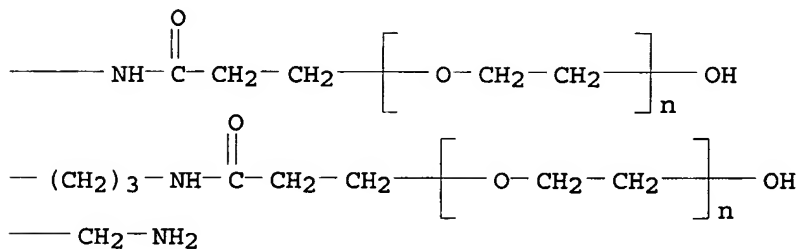
CRN 210292-29-8

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 CCI PMS

PAGE 1-A



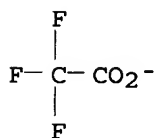
PAGE 1-B



CM 2

CRN 14477-72-6

CMF C2 F3 O2



IT 57757-57-0DP, crosslinked with NLS peptide and DPDPB

389132-31-4P

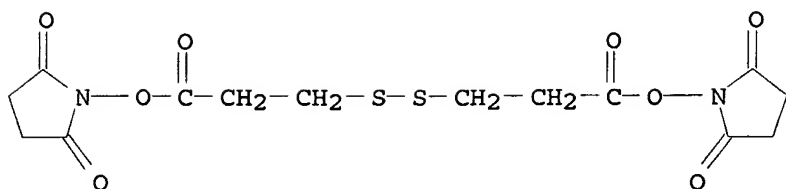
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)

(polymer formation in presence of nucleic acid using template  
 polymerization)

RN 57757-57-0 HCAPLUS

CN Propanoic acid, 3,3'-dithiobis-, 1,1'-bis(2,5-dioxo-1-pyrrolidinyl)  
 ester (CA INDEX NAME)





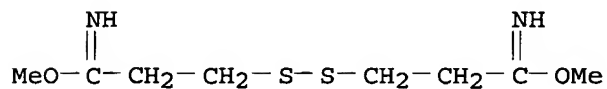
RN 389132-31-4 HCAPLUS

CN Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, polymer with N,N'-bis(2-aminoethyl)-1,3-propanediamine and  $\alpha, \alpha', \alpha'', \alpha'''$ -[1,3-propanediylbis[(2-aminoethyl)nitrilio]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)] salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 59012-54-3

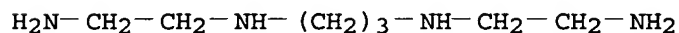
CMF C8 H16 N2 O2 S2



CM 2

CRN 4741-99-5

CMF C7 H20 N4



CM 3

CRN 210292-30-1

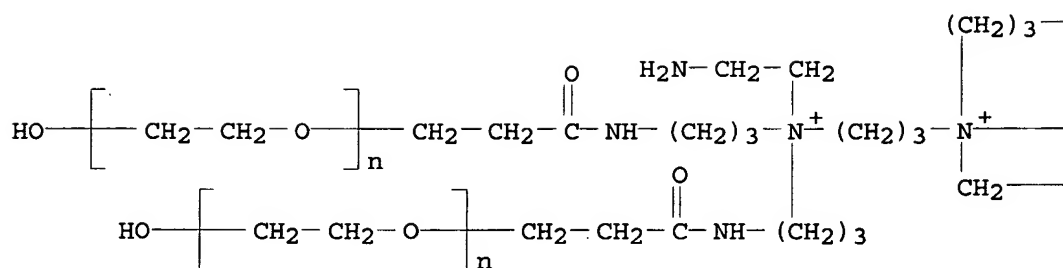
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C31 H66 N8 O8 . 2  
C2 F3 O2

CM 4

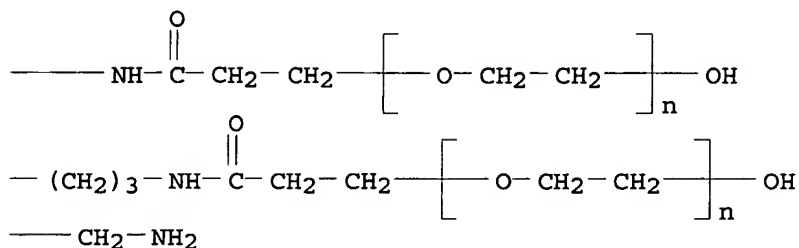
CRN 210292-29-8

CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C31 H66 N8 O8  
CCI PMS

PAGE 1-A



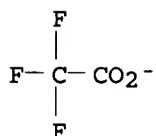
PAGE 1-B



CM 5

CRN 14477-72-6

CMF C2 F3 O2



IC ICM A61K048-00

INCL 514044000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 9, 35

ST nucleic acid template polymn polyelectrolyte; DNA template  
polymn polyelectrolyte

IT Genetic vectors

Polyelectrolytes

Transformation, genetic

(polymer formation in presence of nucleic acid using template  
polymerization)

IT 389132-33-6P

RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic  
preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)(polymer formation in presence of nucleic acid using template  
polymerization)

IT 51834-66-3P 109970-44-7P 136058-30-5P 210292-13-0P  
 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P  
 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P  
 210292-25-4P 210292-26-5P 210292-28-7P 210292-30-1P  
 389132-27-8P 389132-28-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (polymer formation in presence of nucleic acid using template  
 polymerization)  
 IT 25232-42-2P, Poly(1-vinylimidazole) 57757-57-0DP,  
 crosslinked with NLS peptide and DPDPB 141647-62-3DP, DPDPB,  
 crosslinked with NLS peptide and DSP 210292-07-2P 248915-94-8P  
 248915-97-1P 248915-98-2P 389132-29-0P 389132-30-3P  
 389132-31-4P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (polymer formation in presence of nucleic acid using template  
 polymerization)  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L54 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:708870 HCAPLUS  
 DOCUMENT NUMBER: 131:327545  
 TITLE: Polymer formation in the presence of nucleic  
 acid using template polymerization  
 INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker,  
 Vladimir G.  
 PATENT ASSIGNEE(S): Mirus Corporation, USA  
 SOURCE: PCT Int. Appl., 73 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955825	A1	19991104	WO 1999-US8965	199904 23
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1073707	A1	20010207	EP 1999-920014	199904 23
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				
PRIORITY APPLN. INFO.:			US 1998-70299	A 199804 30
			WO 1999-US8965	W 199904 23

AB Polymers are formed in the presence of nucleic acid using template  
 polymerization Also, polymerization occurs in heterophase systems. These  
 methods

can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. Step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

IT 210292-30-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(polymer formation in the presence of nucleic acid using template polymerization)

RN 210292-30-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha, \alpha', \alpha'', \alpha'''$ -[1,3-propanediylbis[[ (2-aminoethyl)nitrilio]bis[3,1-propanediylimino(3-oxo-3,1-propanediyl)]]]tetrakis[ $\omega$ -hydroxy-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

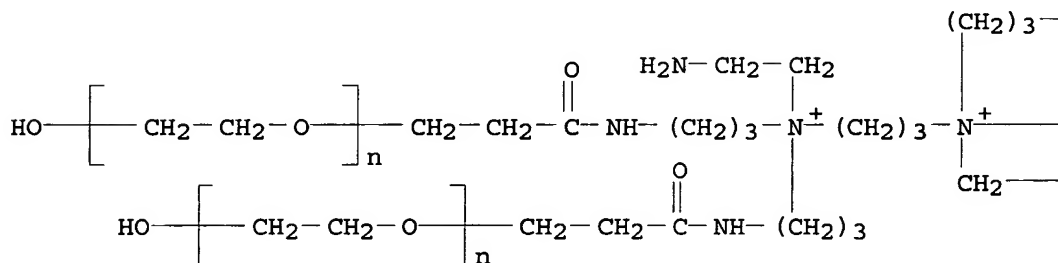
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CRN 210292-29-8

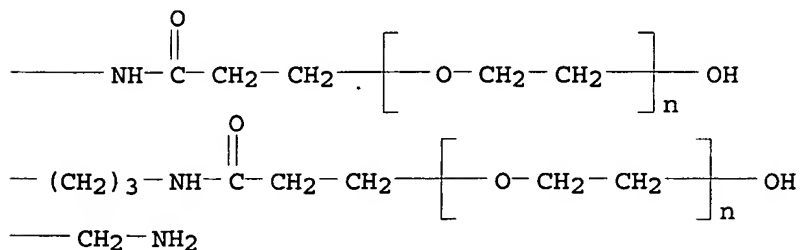
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CCI PMS

PAGE 1-A



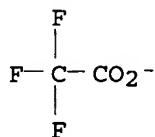
PAGE 1-B



CM 2

CRN 14477-72-6

CMF C2 F3 O2



IT 248915-96-0P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(polymer formation in the presence of nucleic acid using template polymerization)

RN 248915-96-0 HCAPLUS

CN 1,3-Propanediamine, N,N'-bis(2-aminoethyl)-, polymer with  
 $\alpha,\alpha',\alpha'',\alpha'''$ -[1,3-propanediylbis[[ (2-  
 aminoethyl)nitri]io]bis[3,1-propanediylimino(3-oxo-3,1-  
 propanediyl)]]]tetrakis[ $\omega$ -hydroxypoly(oxy-1,2-ethanediyl)]  
 salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 4741-99-5

CMF C7 H20 N4



CM 2

CRN 210292-30-1

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C31 H66 N8 O8 . 2  
C2 F3 O2

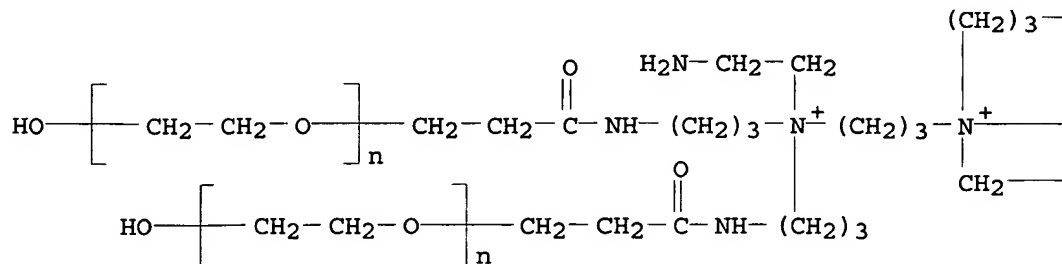
CM 3

CRN 210292-29-8

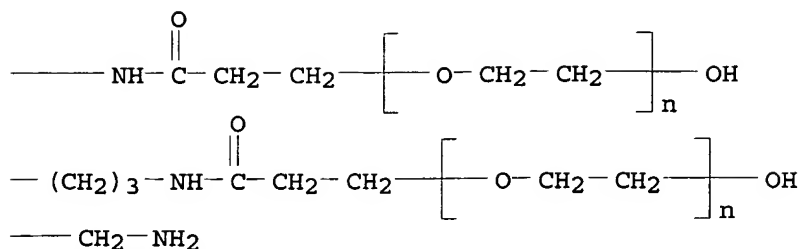
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C31 H66 N8 O8

CCI PMS

PAGE 1-A



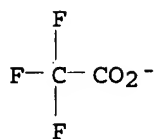
PAGE 1-B



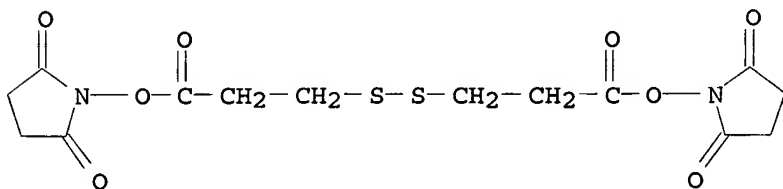
CM 4

CRN 14477-72-6

CMF C2 F3 O2



IT 57757-57-0DP, crosslinked with NLS peptide and DPDPB  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (polymer formation in the presence of nucleic acid using template  
 polymerization)  
 RN 57757-57-0 HCAPLUS  
 CN Propanoic acid, 3,3'-dithiobis-, 1,1'-bis(2,5-dioxo-1-pyrrolidinyl)  
 ester (CA INDEX NAME)



IC ICM C12M001-14  
 ICS C12N011-00; C12N011-02; C12N011-16; C12Q001-04; C12Q001-70  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 35  
 ST DNA template polynm **polyelectrolyte**  
 IT Human adenovirus  
 Human herpesvirus  
 Parvovirus  
**Polyelectrolytes**  
 Retroviridae  
 Sindbis virus  
 Transformation, genetic  
 (polymer formation in the presence of nucleic acid using template  
 polymerization)

IT 51834-66-3P 109970-44-7P 136058-30-5P 205814-86-4P  
 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P  
 210292-18-5P 210292-19-6P 210292-21-0P 210292-22-1P  
 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P  
 210292-28-7P 210292-30-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (polymer formation in the presence of nucleic acid using template  
 polymerization)

IT 25104-18-1P, Poly(L-lysine) 38000-06-5P, Poly(L-lysine)  
 71550-12-4P, Polyallylamine hydrochloride 248915-96-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic  
 use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or  
 reagent); USES (Uses)  
 (polymer formation in the presence of nucleic acid using template  
 polymerization)

IT 25232-42-2P, Poly(1-vinylimidazole) 57757-57-0DP,  
 crosslinked with NLS peptide and DPDPB 141647-62-3DP, DPDPB,  
 crosslinked with NLS peptide and DSP 210292-07-2P 248915-94-8P  
 248915-95-9P 248915-97-1P 248915-98-2P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (polymer formation in the presence of nucleic acid using template  
 polymerization)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L54 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:731481 HCAPLUS  
 DOCUMENT NUMBER: 128:39545  
 TITLE: Hydrophobically-modified bioadhesive  
**polyelectrolytes** and methods relating  
 thereto  
 INVENTOR(S): Inoue, Tadaaki; Chen, Guohua; Hoffman, Allan S.  
 PATENT ASSIGNEE(S): University of Washington, USA  
 SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09286921	A	19971104	JP 1995-254421	199508 25
US 5770627	A	19980623	US 1995-515747	199508 16
PRIORITY APPLN. INFO.:			US 1995-515747	A 199508 16

AB Hydrophobically-modified bioadhesive **polyelectrolytes**  
 containing a bioadhesive **polyelectrolyte** and a hydrophobic  
 component are disclosed. Also disclosed are **polyelectrolyte**  
 -agent compns. wherein the hydrophobically-modified bioadhesive

**polyelectrolyte** is loaded with a pharmaceutically, cosmetically or prophylactically acceptable agent [ e.g. doxorubicin-HCl].

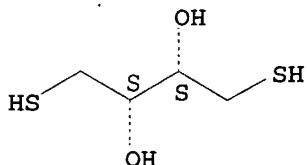
IT 3483-12-3, DTT 57757-57-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)

RN 3483-12-3 HCAPLUS

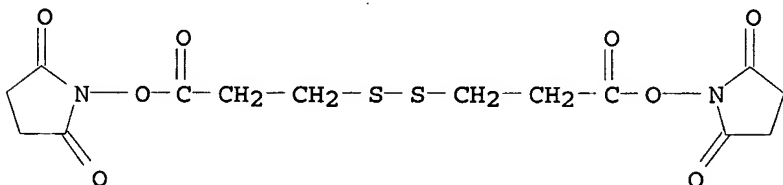
CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (CA INDEX NAME)

Relative stereochemistry.



RN 57757-57-0 HCAPLUS

CN Propanoic acid, 3,3'-dithiobis-, 1,1'-bis(2,5-dioxo-1-pyrrolidinyl)  
ester (CA INDEX NAME)



IT 26355-01-1DP, Hydroxyethyl methacrylate-methyl methacrylate  
copolymer, amino-terminated 39921-94-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)

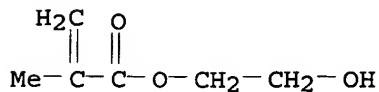
RN 26355-01-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
methyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 868-77-9

CMF C6 H10 O3

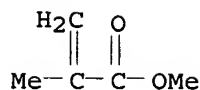


CM 2

CRN 80-62-6

CMF C5 H8 O2





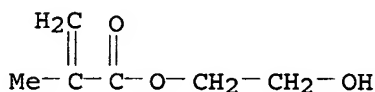
RN 39921-94-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

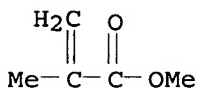
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CRN 80-62-6

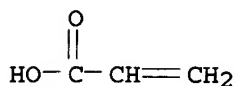
CMF C5 H8 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



IC ICM . C08L101-00

ICS A61K047-32; C08F008-00; C08J005-18; C08L051-00; C08L053-00; C08L067-02; C08L071-02; C08L075-04; C08L083-04; C08L101-08; C08F020-04

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 38, 62

ST hydrophobically modified bioadhesive **polyelectrolyte** pharmaceutical carrier; drug delivery system doxorubicin

IT Adhesives

(biol.; hydrophobically-modified bioadhesive **polyelectrolytes** as carriers for drugs or other products)

IT Drug delivery systems

(carriers; hydrophobically-modified bioadhesive

- polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(gels; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Dissolution rate  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)
- IT Peptides, biological studies  
Proteins, general, biological studies  
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)
- IT **Polyelectrolytes**  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)
- IT Drug delivery systems  
(ointments; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(oral; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(powders; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(solns.; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(systemic; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT Drug delivery systems  
(topical; hydrophobically-modified bioadhesive  
**polyelectrolytes** as carriers for drugs or other products)
- IT 58-55-9P, Theophylline, biological studies 318-98-9P, Propranolol  
hydrochloride 9001-63-2P, Lysozyme 25316-40-9P, Doxorubicin  
hydrochloride  
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)
- IT 78-67-1, Aibn 3483-12-3, DTT 57757-57-0  
122159-53-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)
- IT 9011-14-7DP, Poly(methyl methacrylate), amino-terminated  
25322-25-2P, Acrylic acid-methyl methacrylate copolymer  
26355-01-1DP, Hydroxyethyl methacrylate-methyl methacrylate  
copolymer, amino-terminated 39921-94-3P 199606-95-6P  
199606-97-8P 199606-99-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(hydrophobically-modified bioadhesive **polyelectrolytes**  
as carriers for drugs or other products)

=&gt;